

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE ☒

CONFIDENTIAL
ZONE ☐

2. NAME OF OPERATOR

ARCO Oil and Gas Company,
a Division of Atlantic Richfield Company

3. ADDRESS OF OPERATOR

P. O. Box 5540, Denver, Colorado 80217

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface 990' FNL & 1750' FWL (NE1/4 NW1/4)

At proposed prod. zone

Approx the same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

Approx 8 mi SE of Cleveland, Utah

15. DISTANCE FROM PROPOSED*

990'

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE

2480

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

NA

19. PROPOSED DEPTH

4015'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

Ungraded ground elevation 5748'

22. APPROX. DATE WORK WILL START*

July 26, 1984

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36#, K-55,	STC 1400'	Cmt to surf - approx 800 sx
8-3/4"	5-1/2"	14#, K-55,	STC 4015'	Cmt to 1000' above uppermost productive zone, approx 430 sx

Propose to drill to 4015' to test the Moenkopi Fm. This permit is being filed in accordance with Onshore Oil & Gas Order Number 1.

Attachments:

Drilling Program with Exhibits

Surface Use Program with Exhibits

The subject lease expires July 31, 1984. Operations are planned to be conducted over the lease expiration date.

All information regarding this subject is requested to be held confidential.

ARCO Oil & Gas is the current lessee of record on the subject lease.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

W.A. Walther, Jr.

HRE
KUP

TITLE

Operations Manager

DATE

July 1984

(This space for Federal or State office use)

PERMIT NO.

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

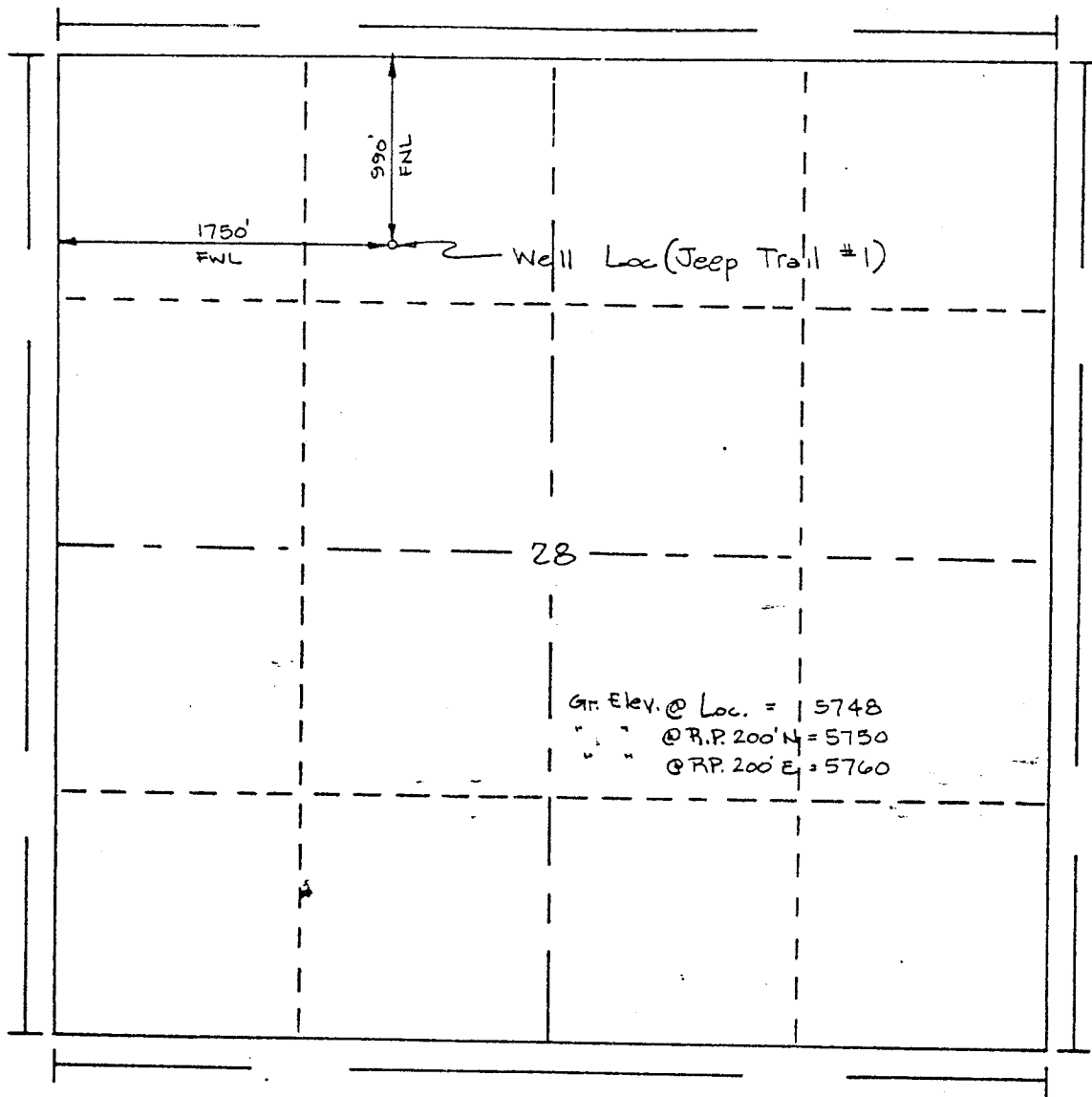
DATE: *7/18/84*

BY: *John K. Bays*



EXHIBIT B

R. 10 E.



T. 18 S.

Scale... 1" = 1000'

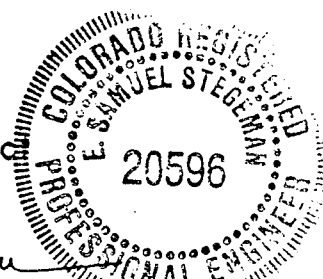
Powers Elevation of Denver, Colorado
has in accordance with a request from HARRY ENGLE
for ARCO OIL & GAS.
determined the location of JEEP TRAIL #1
to be 990' FNL & 1750' FNL of Section 28 Township 18 South
Range 10 East of the SALT LAKE Meridian
EMERY County, UTAH

I hereby certify that this plat is an
accurate representation of a correct
survey showing the location of

Date: JUNE 11, 1984Samuel StegemanLicensed Engineer
State of COLORADO

No. 20596

"UTAH exception"



*All information regarding this
subject is to be held confidential

BUREAU OF LAND MANAGEMENT
MOAB DISTRICT
CONDITIONS OF APPROVAL FOR PERMIT TO DRILL

Company: ARCO Oil & Gas Company

Well No.: Jeep Trail #1

Location: Sec: NE NW 28-T18S-R10E

Lease No.: U-26316

Onsite Inspection Date: June 28, 1984

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Order No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to ensure compliance.

A. DRILLING PROGRAM

1. Surface Formation and Estimated Formation Tops:

Morrison/Salt Wash - Surf	Moenkopi - 3015'
Entrada - 780'	Torrey - 3239'
Carmel - 1340'	Sinbad - 3469'
Navajo - 1830'	Kaibab - 3865'
Kayenta - 2315'	White Rim - 3915'
Chinle - 2715'	T.D. - 4015'

2. Estimated Depth at Which Oil, Gas, Water, or Other Mineral-Bearing Zones are Expected to Be Encountered:

Formation & Depth

Expected oil zones:	Moenkopi @ 3015'; Torrey @ 3239'; Sinbad @ 3469'
Expected gas zones:	Moenkopi @ 3015'; Torrey @ 3239'; Sinbad @ 3469'
Expected water zones:	Morrison @ surf; Entrada @ 780'; Navajo (possible) @ 1830'; Kayenta (possible) @ 2315'
Expected mineral zones:	None anticipated

All fresh water and prospectively valuable minerals (as described by BLM at onsite) encountered during drilling will be recorded by depth, cased and cemented. All oil and gas shows will be tested to determine commercial potential.

3. Minimum Specifications for Pressure Control:

Exhibit "A" is a schematic diagram of the blowout preventer equipment. The annular preventer will be tested to 1500 psi and the pipe and blind rams will be tested to 3000 psi upon nipple up. Pipe rams will be operationally checked each 24-hour period, as will blind rams and annular preventer each time pipe is pulled out of the hole. All checks of BOP will be noted on Daily Drilling Reports. Accessories to BOP equipment will include an upper and lower kelly cock, a floor safety valve, a drill string BOP, and a choke manifold with pressure rating equipment equal to the BOP stack.

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Choke manifold and safety valves will be pressure tested to 3000 psi upon nipple-up. Exhibit "A" also shows the proposed Accumulator Unit and Choke Manifold. Hydraulic controls for BOPE will be located at the Accumulator Unit with hand wheel back-up.

BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventer controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs. The Resource Area will be notified 48 hours in advance when pressure tests are to be conducted.

4. Proposed Casing Program:

<u>Casing</u>	<u>Hole Size</u>	<u>Interval</u>	<u>Section Length</u>	<u>Size OD</u>	<u>Weight, Grade Connection</u>	<u>New/Used</u>
Surface	12-1/4"	0 - 1400'	1400'	9-5/8"	36#, K-55, STC	New
Production	8-3/4"	0 - 4015'	4015'	5-1/2"	14#, K-55, STC	New

Cement Program:

Surface Casing: Cmt to surface w/approx 800 sx Cl "H" w/2% CaCl₂, + additives
Cmt to be circulated to surface. Mixed at 14.5 ppg. Yield: 1.54 ft³/sx.

Production Casing: Precede cement with 20 bbls spacer & 4 gals clay stabilizer.
Mix & pump approx 430 sx Cl "H" w/2% CaCl₂ + additives. Mixed at 14.5 ppg, yield 1.54 ft³/sx. Estimated top of cement at 2000'.

Note: Hole conditions will dictate type and percentage of additives to be used.

All potentially productive hydrocarbon zones will be cemented to prevent communication. Actual production casing cement volumes will be based upon caliper log plus 20%.

Anticipated cement tops will be reported as to depth, not the expected number of sacks. The Resource Area will be notified 48 hrs in advance when running casing strings and cement.

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5. Type and Characteristic of Proposed Drilling Fluids:

Mud system will be gel-chemical with adequate stocks of sorptive agents on site to handle possible spills of fuel and oil on the surface. Heavier muds will be on location to be added if pressure requires. Adequate mud materials will be stockpiled on location to completely rebuild entire mud system volume (surface volume + hole volume). Surface volume estimated at ±500 bbls.

<u>Depth</u>	<u>Type</u>	<u>Weight #/gal.</u>	<u>Visc. sec/qt.</u>	<u>Fluid Loss cc</u>
0'-1400'	Fresh water gel, lime, spud mud	8.3-8.6	30-40	No control
1400'-TD	Low Solids Non Dispersed	9.0-9.4	35-45	15 cc

A shale shaker, desander, and desilter will be utilized to aid in solids control.

Bloome line will be misted to reduce fugative dust when air drilling. There will be 150' available on location to construct flare pit if required.

6. Coring, Logging, and Testing Program:

- a. Coring: Three 60' cores in the Moenkopi
- b. DSTs: Three open hole DSTs are planned in the Moenkopi
- c. Logging as follows:

<u>Open Hole</u>		<u>Cased Hole</u>	
BHCS/GR	- TD to base of surf csg	CBL/CCL/GR/VDL	- TD to TOC
FDC/CNL/GR/Cal	- " " " "		
DIL/SP/GR	- " " " "		
Sonic Waveform	- " " " "		

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted to the District Office not later than thirty (30) days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analyses, well test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. Samples (cuttings, fluids, and/or gases) will be submitted when requested by the Moab District Manager.

7. Abnormal Conditions, Bottom Hole Pressures and Potential Hazards:

No abnormal pressures or temperatures have been noted or reported in wells drilled in the area nor at the depths anticipated in this well. H₂S is not anticipated at any depths in this well.

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8. Anticipated Starting Dates and Notifications of Operations:

The operator will contact the San Rafael Resource Area at (801)637-4584, forty-eight (48) hours prior to beginning any dirt work on this location.

No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the District Manager. If operations are to be suspended, prior approval of the District Manager will be obtained and notification given before resumption of operations.

The spud date will be reported orally to the Area Manager (Moab District at 801-259-6111) within a minimum of twenty-four (24) hours prior to spudding. Written notification in the form of a Sundry Notice (Form 3160-5) will be submitted to the District Office within twenty-four (24) hours after spudding. If the spudding occurs on a weekend or holiday, the written report will be submitted on the following regular work day.

In accordance with Onshore Oil and Gas Order No. 1, this well will be reported on Form 9-329, "Monthly Report of Operations", starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report will be filed directly with the BLM District Office, P.O. Box 970, Moab, Utah 84532.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported to the Resource Area in accordance with requirements of NTL-3A.

If a replacement rig is contemplated for completion operations, a "Sundry Notice" (Form 3160-5) to that effect will be filed for prior approval of the District Manager, and all conditions of this approval plan are applicable during all operations conducted with the replacement rig. In emergency situations, verbal approval to bring on a replacement rig will be approved by the District Petroleum Engineer.

Should the well be successfully completed for production, the District Manager will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication, not later than five (5) business days following the date on which the well is placed on production.

A first production conference will be scheduled within fifteen (15) days after receipt of the first production report. The Resource Area Office will coordinate the field conference.

No well abandonment operations will be commenced without the prior approval of the District Manager. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the District Petroleum Engineer. A "Subsequent Report of Abandonment" (Form 3160-5) will be filed with the District Manager within thirty (30) days following completion of the well for abandonment. This report will indicate where plugs were placed and the current

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status of surface restoration. Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the Area Manager or his representative, or the appropriate surface managing agency.

Approval to vent/flare gas during initial well evaluation will be obtained from the District Office. This preliminary approval will not exceed 30 days or 50 MMCF gas. Approval to vent/flare beyond this initial test period will require District Office approval pursuant to guidelines in NTL-4A.

Upon completion of approved plugging, a regulation marker will be erected in accordance with 43 CFR 3162.6. The marker will be constructed as follows:
According to regulations.

The top of the marker will be closed or capped.

The following minimum information will be permanently placed on the marker with a plate, cap or beaded-on with a welding torch:

"Fed" or "Ind", as applicable. "Well number, location by 1/4 1/4 section, township and range". "Lease number".

Other: The anticipated spud date is July 26, 1984. ARCO Oil & Gas Company has in effect a \$150,000 Nation Wide Drilling Bond (#7943391) to cover drilling operations on all Federal lands. ARCO Oil & Gas Company is the current lessee of record on the subject lease.

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B. SURFACE USE PLAN

1. Existing Roads:

- a. The location is approximately 8 miles SE of Cleveland, Utah. The proposed wellsite and elevation plat are shown as Exhibit "B". Staking included two directional reference stakes.
- b. Exhibit "C" describes the route to location. Hwy 10 to U155 to Cleveland, Utah, then Buckhorn road to location.
- c. There will not be any improvements or maintenance to existing roads. Exhibit "D" shows all roads near the location.
- d. An Egress Permit is being applied for through Emery County Road Department, an approved copy will be submitted under a separate letter.

2. Planned Access Roads to be Constructed:

1. Width will be 18' (top surface), maximum disturbed width will be 24'.
2. Maximum grade will be 10%.
3. There are no major cuts or fills.
4. Turnouts are not required.
5. The access road will be designed to ensure proper drainage, it is centerline flagged from the county road.
6. One 18" culvert is required coming off the county road to location.
7. There will not be any fence cuts.
8. All surfacing material will be from materials located at the access road. No additional surface material will be required.
9. There are no existing facilities on the proposed location.

Surface disturbance and vehicular travel will be limited to the approved location and access road. Any additional area needed will be approved by the Area Manager in advance.

The access road will be rehabilitated or brought to Resource (Class III) Road Standards within sixty (60) days of dismantling of the drilling rig. If this time frame cannot be met, the Area Manager will be notified so that temporary drainage control can be installed along the access road.

3. Location of Existing Wells:

1. Water wells - 1 (one) private well \pm 1/2 mile south of the proposed location.
2. Injection wells - None
3. Disposal wells - None
4. Producing wells - None
5. Drilling wells - None
6. Temporarily abandoned wells - None
7. Abandoned wells - None
8. Shut-in wells - None
9. Monitoring or observation wells - None

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4. Location of Tank Batteries and Production Facilities:

All permanent (onsite for six (6) months or longer) structures constructed or installed (including oil well pump jacks) will be painted a flat, nonreflective, earth tone color to match the standard environmental colors, as determined by the Rocky Mountain Five-State Interagency Committee. All facilities will be painted within six (6) months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded. Colors will be as follows:

per Rocky Mountain Five State Interagency Committee

If a tank battery is constructed on this lease, it will be surrounded by a dike of sufficient capacity to contain 1-1/2 times the storage capacity of the battery.

All loading lines and valves will be placed inside the berm surrounding the tank battery.

All site security guidelines identified in 43CFR 3162.7 regulations will be adhered to.

All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the District Manager.

All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.

Gas meter runs for each well will be located within five hundred (500) feet of the wellhead. The gas flowline will be buried from the wellhead to the meter along with any other sections occurring on the pad. Meter runs will be housed and/or fenced.

The oil and gas measurement facilities will be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three (3) months on new meter installations and at least quarterly thereafter. The Area Manager will be provided with a date and time for the initial meter calibration and all future meter-proving schedules. A copy of the meter calibration reports will be submitted to the Resource Area Office. All meter measurement facilities will conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.

ARCO Oil & Gas Company does not own or operate any facilities within a one-mile radius of the proposed location. This well is a wildcat. If the well is a producer, a Sundry Notice will be filed describing all proposed production facilities.

5. Location and Type of Water Supply:

A. All water needed for drilling purposes will be obtained from:
Huntington/Cleveland Irrigation Company

Contact: Mar Grange at (801)687-9922

Water location is at the Lawrence/Buckhorn Creek in SE1/4 Sec 33-T17S-R9E

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A temporary water use permit for this operation will be obtained from the Utah State Engineer & Huntington/Cleveland Irrigation Company. Water obtained on private land, or land administered by another agency, will require approval from the owner or agency for use of the land. An approved temporary water use permit will be filed under a separate letter.

B. Water trucks will be used to haul water to location.

C. No water well will be drilled.

D. No water will be taken off Federal lands.

6. Source of Construction Material:

Pad construction material will be obtained from cut material located onsite. No material will be taken from lands other than the proposed location.

The use of materials under BLM jurisdiction will conform to 43 CFR 3610.2-3. Source of construction material will be located on lease.

7. Methods of Handling Waste Disposal:

The reserve pit will not be lined unless deemed necessary during construction, if needed it will be lined with native clays. Bentonite may be purchased (via permit through BLM) at BLM community pit.

Three sides of the reserve pit will be fenced with 39" net wire with 1 strand of barb wire on top before drilling starts. The fourth side will be fenced as soon as the drilling is completed. The fence will be kept in good repair while the pit is drying.

All trash must be contained in a wire cage and disposed of at a sanitary landfill. No burying will take place.

Produced waste water will be confined to a lined pit for a period not to exceed ninety (90) days after initial production. During the ninety (90) day period, an application for approval of a permanent disposal method and location, along with the required water analysis, will be submitted for the District Manager's approval pursuant to Onshore Oil and Gas Order No. 3 (NTL-2B).

Drill cuttings will be buried in the reserve pit. Drilling fluids will be handled and disposed of in the reserve pit. Any fluids produced during drilling test or while making production test will be collected in a test tank. Any spills of oil gas, salt water or other noxious fluids will be cleaned up and removed.

Chemical toilet facilities will be provided for human waste. Garbage and non-flammable waste will be handled in a closed wire cage. Drill fluids, water, drilling mud and tailings will be kept in reserve pit.

After the rig moves out, all materials will be cleaned up and no adverse materials will be left on location. All dangerous open pits will be fenced during drilling and kept closed until such time as the pit is leveled.

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8. Ancillary Facilities:

Living facilities will be required. They will be located onsite. Three (3) or four (4) trailers will be on location, they will be equipped with concrete septic tanks (closed system). The septic tanks will be pumped as required. No waste will be disposed of on location.

9. Well Site Layout:

The reserve pit will be located on the east side of location on the uphill side. Exhibit "E" is drillsite location as staked. Exhibit "F" shows planned cuts and fills.

The top 6" of soil material will be removed from the location and stockpiled separately off the location on the North, South or West sides. Topsoil along the access road will be reserved in place adjacent to the road.

Access to the well pad will be from the county road to the south side of the location. The access road is centerline flagged from the county road.

A trash pit will not be allowed on location.

Exhibit "G" is a diagram of the rig and equipment.

10. Plans for Restoration of Surface:

Immediately upon completion of drilling, the location and surrounding area will be cleared of all remaining debris, materials, trash and junk not required for production. Before any dirt work to restore the location takes place, the reserve pit must be completely dry.

The operator or his contractor will notify the San Rafael Resource Area at (801)637-4584 forty-eight (48) hours before starting reclamation work that involves earthmoving equipment and upon completion of restoration measures.

All disturbed areas will be recontoured to the approximate natural contours. The stockpiled topsoil will be evenly distributed over the disturbed areas. Prior to reseeding, all disturbed areas, including the access roads, will be scarified and left with a rough surface.

Seed will be broadcast or drilled at a time specified by the BLM. If broadcast, a harrow or some other implement will be dragged over the seeded area to assure seed coverage. The following seed mixture will be used:

- | | |
|------------------------|-------------|
| 1. Sand Drop Seed | 1/2 lb/acre |
| 2. Indian Rice | 1 lb/acre |
| 3. Yellow Sweet Clover | 1 lb/acre |

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The reserve pit and that portion of the location and access road not needed for production or production facilities will be reclaimed. The time required to complete the reclamation will depend upon the area to be reclaimed. ARCO Oil & Gas Company agrees to begin reclamation as soon as weather conditions are suitable and further agrees to complete the project in a timely manner.

11. Surface and Mineral Ownership:

The location surface and mineral rights are both Federal, administered by the BLM.

12. Other Information:

For any questions regarding this permit, please contact Mr. Harold Engel of our Drilling Department at (303)293-7305.

There will be no deviation from the proposed drilling and/or workover program without prior approval from the District Manager. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended, or abandoned, will be identified in accordance with 43 CFR 3162.2.

"Sundry Notice and Report on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3164.

The dirt contractor will be provided with an approved copy of the surface use plan.

A cultural resource clearance will be required before any construction begins. If any cultural resources are found during construction, all work will stop and the Area Manager will be notified. Exhibit "H" is copy of the cultural resource report prepared by Powers Elevation.

This permit will be valid for a period of one (1) year from the date of approval. After permit termination, a new application will be filed for approval for any future operations.

Exhibit "I" is a copy of the proposed Jeep Trail Unit Area. This well is the first proposed well within the unit area. Drilling operations will be conducted over July 31, 1984.

13. Lessee's or Operator's Representative and Certification:

W. A. Walther, Jr.
ARCO Oil and Gas Company
P. O. Box 5540
Denver, Colorado 80217
Bus. Tele: (303) 293-7031
Res. Tele: (303) 293-1342

J. M. McCarthy
ARCO Oil and Gas Company
P. O. Box 5540
Denver, Colorado 80217
Bus. Tele: (303) 293-7127
Res. Tele: (303) 293-1339

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Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by ARCO Oil and Gas Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date

10 July 1984

H. A. Walther, Jr.

Operations Manager

ARCO Oil and Gas Company

KUP

ARCO Oil & Gas Company
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NENW Sec. 28-T18S-R10E
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The onsite inspection was held 6/28/84

PARTICIPANTS:

Harold R. Engel

Clifton R. Henney

Mervin S. Miles

TITLES:

Drilling Engineer, ARCO Oil & Gas Company

Foreman/Ross Construction Company

BLM

District Office contact is Lynn Jackson

Office phone: (801)259-6111

City: Moab

State: Utah

Resource Area Manager's address and contacts are:

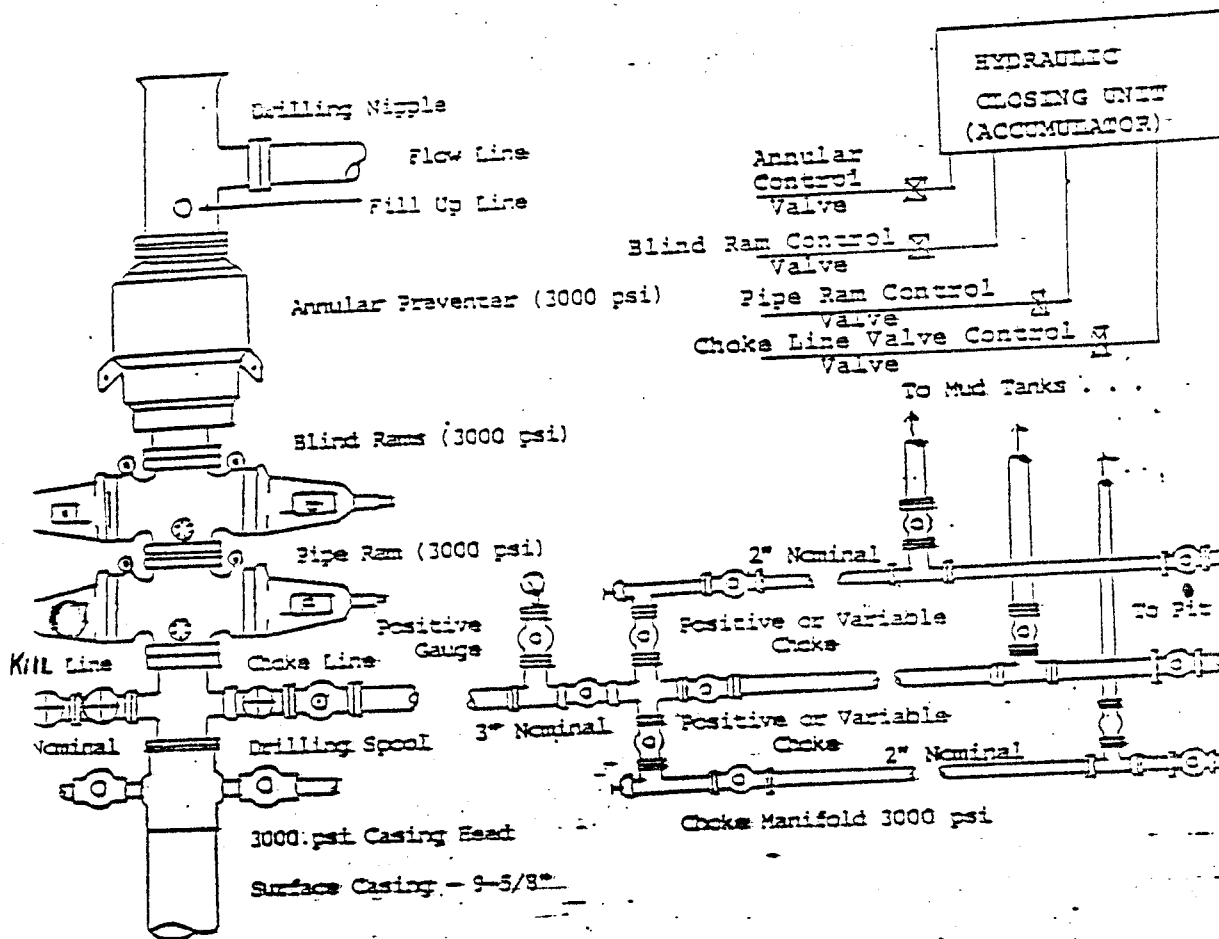
Address: 900 N. 7th East

Your contact is: Mervin S. Miles -

Office phone: (801)637-4584

EXHIBIT "A"

ARCO OIL & GAS CO.
JEEP TRAIL #1.



1. All BOP equipment shall be fluid and mechanically operated.
2. BOP's and all fittings will be in good working condition and rated at 3000 psi W.P. minimum.
3. Equipment through which bit must pass shall be at least as large as casing size being drilled.
4. Nipple above BOP shall be at least same size as casing being set.
5. Upper Kelly Cock and lower Kelly Cock shall be 3000 psi W.P. minimum.
6. Floor safety valve (full opening) and drill string BOP with appropriate rated pressure shall be available on rig floor with connections or subs to fit any tool joint in string.
7. Minimum size for choke line shall be 2 inches nominal diameter, minimum size for vent lines downstream of chokes shall be 2 inches nominal, and vent line which by-passes shall be a minimum of 2 inches nominal and shall be as straight as possible.
8. Fluid lines from accumulator to BOP's and all remote control fluid lines shall be steel and rated at or above maximum accumulator pressure. Lines shall be bundled and protected from damage.
9. Rams will be used in following positions: (ARCO Dril. Supv. may reverse ram location)

	<u>Drilling</u>	<u>Running Casing</u>
Upper Ram	Blind	Blind
Lower Ram	Drillpipe	Casing Rams

10. Minimum size for kill line is 2 inches nominal.

11. Extensions and hand wheels shall be installed.

ALL SPECIFICATIONS LISTED ARE PER API-RP53



POWERS ELEVATION

ARCO OIL & GAS

JEOP TRAIL #1

Gr. Elev. = ~~5733~~
5748

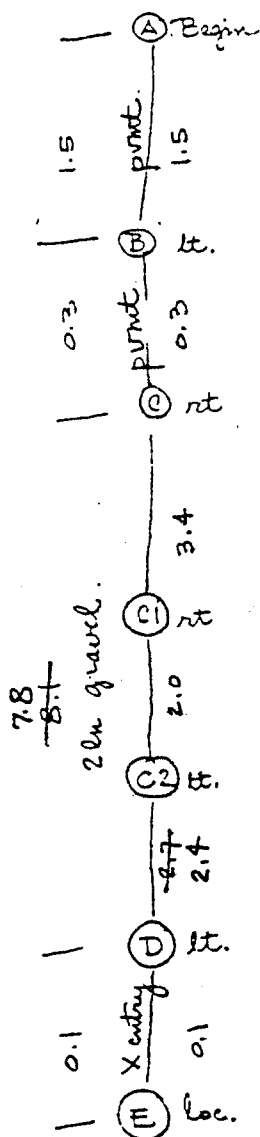
990 FNL ~~FWL~~ FWL
1750 FNL ~~FWL~~ FWL

28-185-10E

EMERY Co., UT.

6-11-54

N



Begin @ intersection of Center St. & Main St.,
Cleveland, Utah and go southward on Center St.
for 1.5 mi on 2 lane paved road to "T"
intersection (B);

Turn left staying on pavement for 0.3 mi to
intersection (C);

Turn right onto 2 lane gravel road for 7.8
~~3.1~~ mi.
to flagged access to location (D).

Turn right @ 4 way intersection

Turn left @ "T" intersection

Turn left onto access flagged cross country for 0.1 mi
to location Jeep Trail #1. (E)

EXHIBIT "C"

1 47'30"



ARCO OIL & GAS

JEOP TRAIL #1

990 FNL T Sec. 23-185-10E

1750 FNL J

EMERY Co., UTAH

1" = 50'

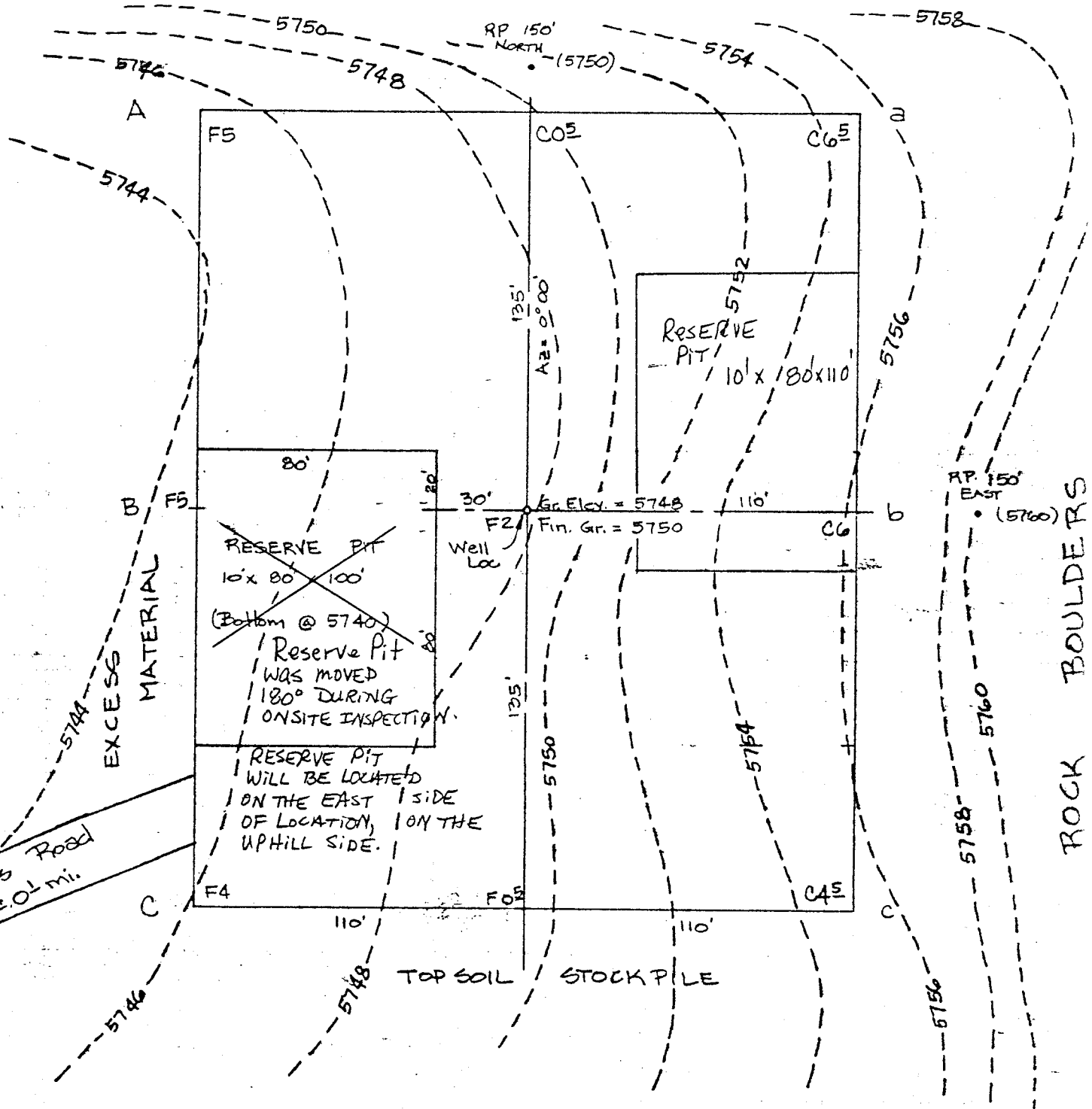
C.I. = 2 foot.

V-Door Az. = 0°00'

EXHIBIT "E"

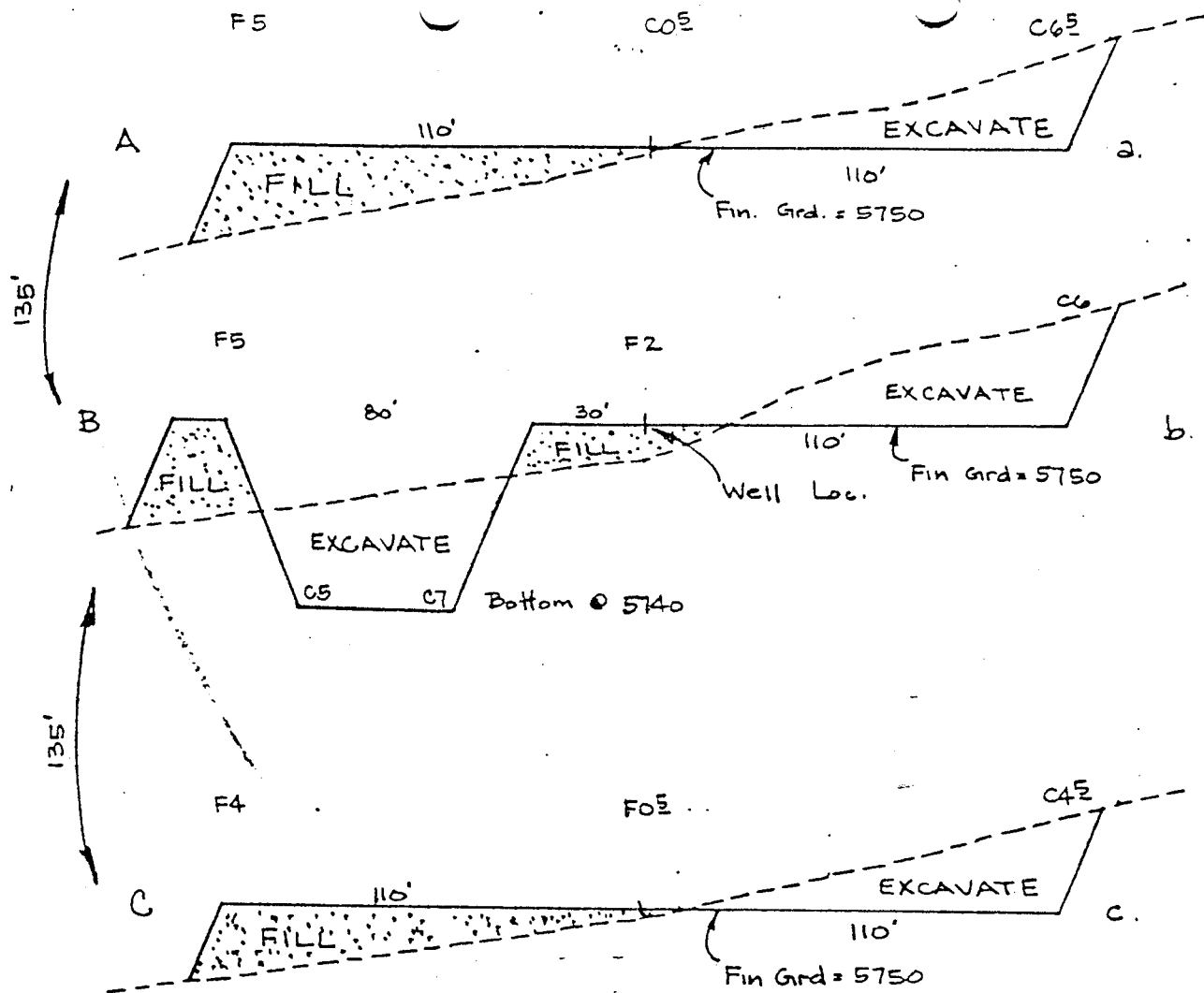
C or F is Cut or Fill from existing ground to finish grade.

ROCK BOULDERS



JUNE 11, 1984
E. SAMUEL STEGEMAN

POWERS ELEVATION CO.
RICHFIELD, UTAH



Note: Reserve Pit was moved 180° at the onsite inspection. It will be located on the east side of location, on the uphill side.

--- Existing ground
 — Proposed grade

C or F is Cut or Fill from existing ground to finish grade.

Scales: 1" = 50' Horiz.
 1" = 10' Vert.

All sideslopes @ 2:1.

± 2,775 yd³ Fill

± 3,750 yd³ Cut

Note: Quantities will vary with final pad size.

ARCO OIL & GAS.
 Jeep Trail #1
 NE-NW 28-18S-10E
 EMERY Co., UTAH

EXHIBIT "F"

JUNE 11, 1984
 E.S.S.

POWERS ELEVATION CO.
 RICHFIELD, UTAH

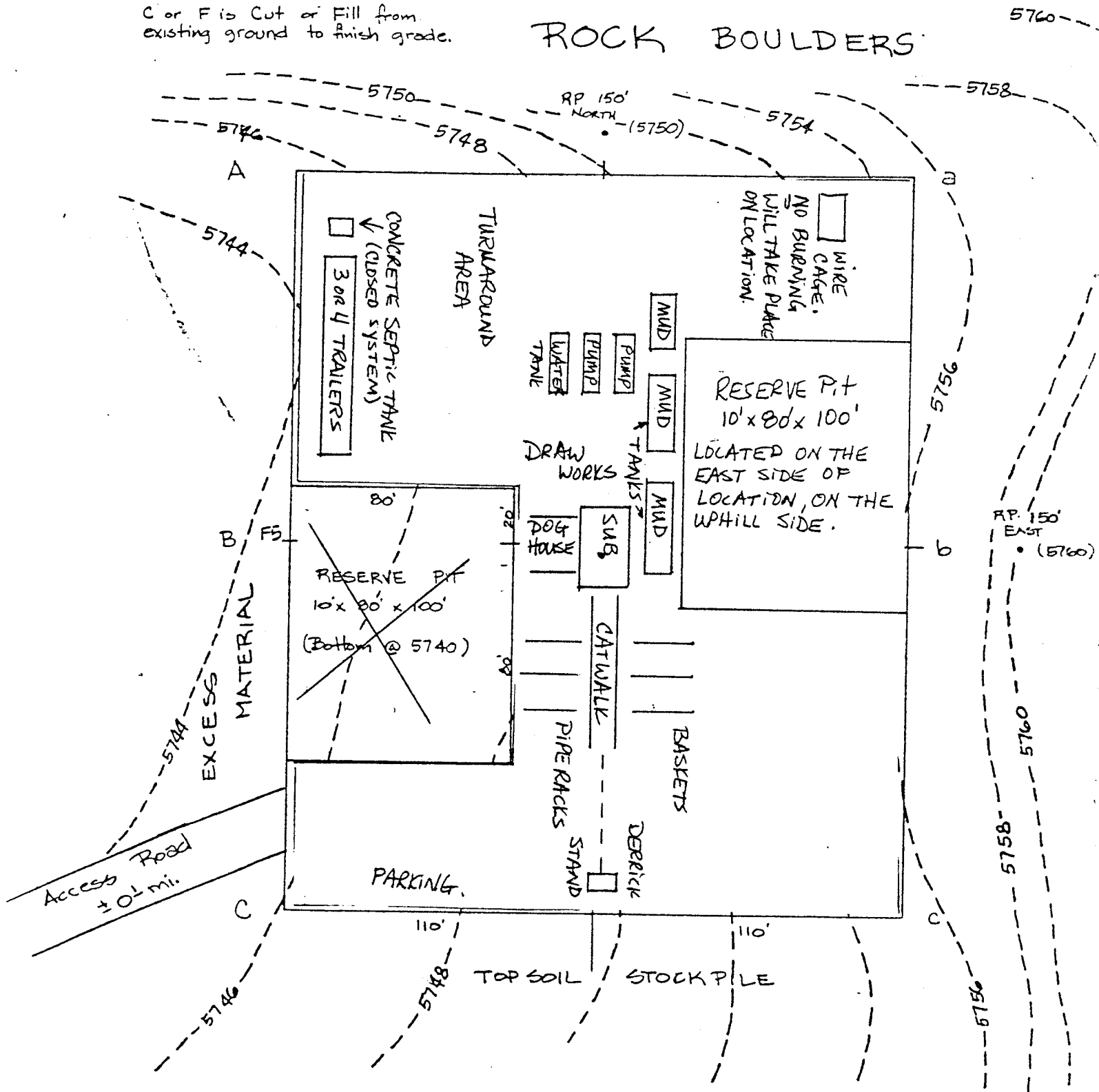
JEEP TRAIL #1
 990 FNL } Sec 23-
 1750 FWL } -10E
 EMERY Co., UTAH

1" = 50'
 C.I. = 2 foot.
 V-Door Az. = 0°00'

EXHIBIT "G"

C or F is Cut or Fill from existing ground to finish grade.

ROCK BOULDERS



JUNE 11, 1984
 E. SAMUEL STEGEMAN

POWERS ELEVATION CO.
 RICHFIELD, UTAH



POWERS ELEVATION

OIL WELL ELEVATIONS - LOCATIONS
ENVIRONMENTAL - ARCHAEOLOGICAL SERVICES
600 SOUTH CHERRY STREET, SUITE 1201
DENVER, COLORADO 80222-1787
PHONE NO. 303/321-2217

June 29, 1984

Mr. Harry Engel
ARCO Oil & Gas Company
707 17th Street, Arco Tower
P.O. Box 5540
Denver, Colorado 80217

Dear Mr. Engel:

Enclosed is the cultural resources survey report for the following ARCO Oil & Gas Company location:

Jeep Trail #1
Emery County, Utah

A BLM Class-III pedestrian survey and an inspection of existing records were performed for this location by Powers Elevation. No cultural resources were found either in the literature, or pertinent site files, or during our field survey.

In view of this lack of cultural resources, we recommend that the proposed project be allowed to proceed.

If you have any questions regarding this report, please feel free to contact this office.

Sincerely,

Marcia J. Tate

Marcia J. Tate
Manager
Archaeology Department

MJT:sr

cc: BLM, Price River Resource Area
SHPO/State Archaeologist
Mr. Richard Fike, BLM State Archaeologist
Mr. Brian P. O'Neil, District Archaeologist

enclosures

EXHIBIT "H"
1/6

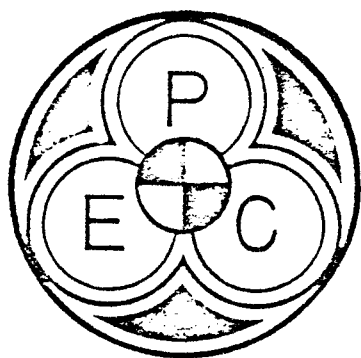
Cultural Resource Management Report

ARCO Oil & Gas Company
Jeep Trail #1
Emery County, Utah

Lead Field Investigator Brian P. O'Neil, M.A.

Principal Investigator Marcia J. Tate

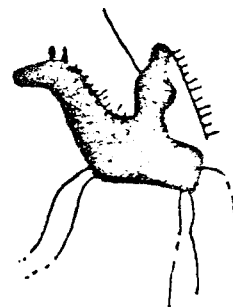
Date June 28, 1984 For ARCO Oil & Gas Company



POWERS ELEVATION

CHERRY CREEK PLAZA, SUITE 1201
600 SOUTH CHERRY ST., DENVER, COLORADO 80222
(303) 321-2217

Archæology Division



A DIVISION OF PETROLEUM INFORMATION CORPORATION/A SUBSIDIARY OF A.C. NIELSEN COMPANY

2/6

Summary Report of
Inspection for Cultural Resources

BLM Report ID No. 1 4 10

Report Acceptable Yes No

Mitigation Acceptable Yes No

Comments:

Report Title J E E P T R A I L # 1

Development Company ARCO Oil & Gas Company

Report Date 06 21 1984

4. Antiquities Permit No. 84-UT-218

Responsible Institution POWERS ELEVATION County Emery

Fieldwork Location: TWN 10E Range 18S Section(s) 28
990' FNL, and TWN Range Section(s)
1,750' FWL. TWN Range Section(s)
Resource Area P R TWN Range Section(s)

PO= PONY EXPRESS, BR= BEAR RIVER, PR= PRICE RIVER, WS= WARM SPRINGS
BC= BOOK CLIFFS, HR= HOUSE RANGE, SE= SEVIER RIVER
HM= HENRY MOUNTAINS, BE= BEAVER RIVER, DX= DIXIE
KA= KANAB, ES= ESCALANTE, SJ= SAN JUAN, GR= GRAND
SR= SAN RAFAEL, DM= DIAMOND MOUNTAIN

FH in spaces 65, 69, 81, 85, 97, 101 Only if:
V= Vernal Meridian
H= Half Township

Description of Examination Procedures: The survey area surrounding the well
ad (210 feet by 270 feet) including a 10-acre buffer zone, was sur-
veyed by walking a series of parallel north-south transects at intervals
of 15-meters. Arroyo cuts, ant hills, and animal burrows were examined
for evidence of buried cultural material. The access road is included
within the 10-acre survey area.

Linear Miles Surveyed

Definable Acres Surveyed

Legally Undefinable Acres Surveyed

* A parcel hard to cadastrally locate i.e., center of section

Description of Findings (attach appendices, if appropriate) 12

No cultural resources were observed within the
surveyed project area.

10. Inventory Type I

R= Reconnaissance
I= Intensive
S= Statistical Sample

Number Sites Found:

13. Collection: N Y=Yes, N=No

Actual/Potential National Register Properties Affected: None.

Literature Search, Location/Date: A files search was conducted June 19, 1984,
the Price Resource Area Office (see continuation sheet)

Conclusion/Recommendations: Due to the lack of cultural resources, we recommend
that the project be allowed to proceed. Should buried cultural materials
be encountered during the construction of the project, all work should cease
and the BLM resource area archaeologist notified.

3/6

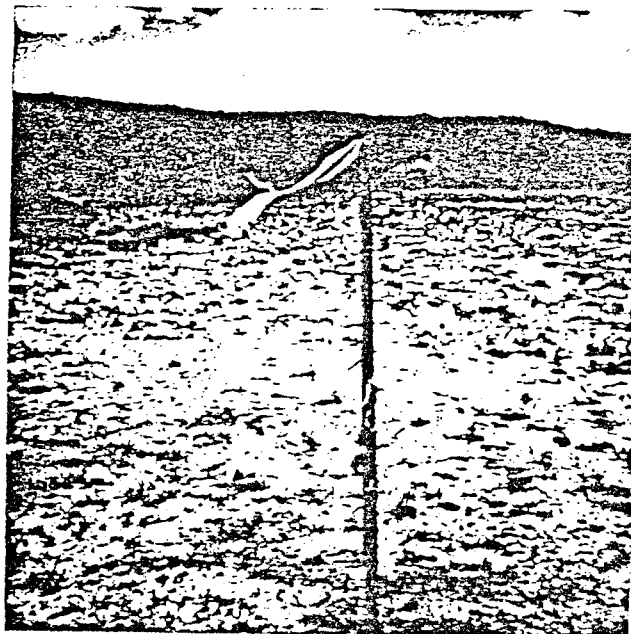
Signature Brian O'Neil

ARCO Oil & Gas Company
Jeep Trail #1
Continuation Sheet

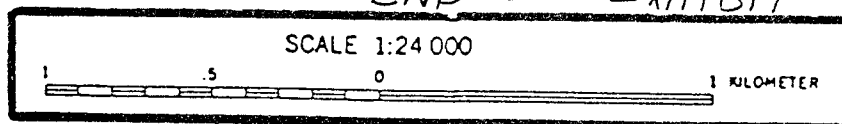
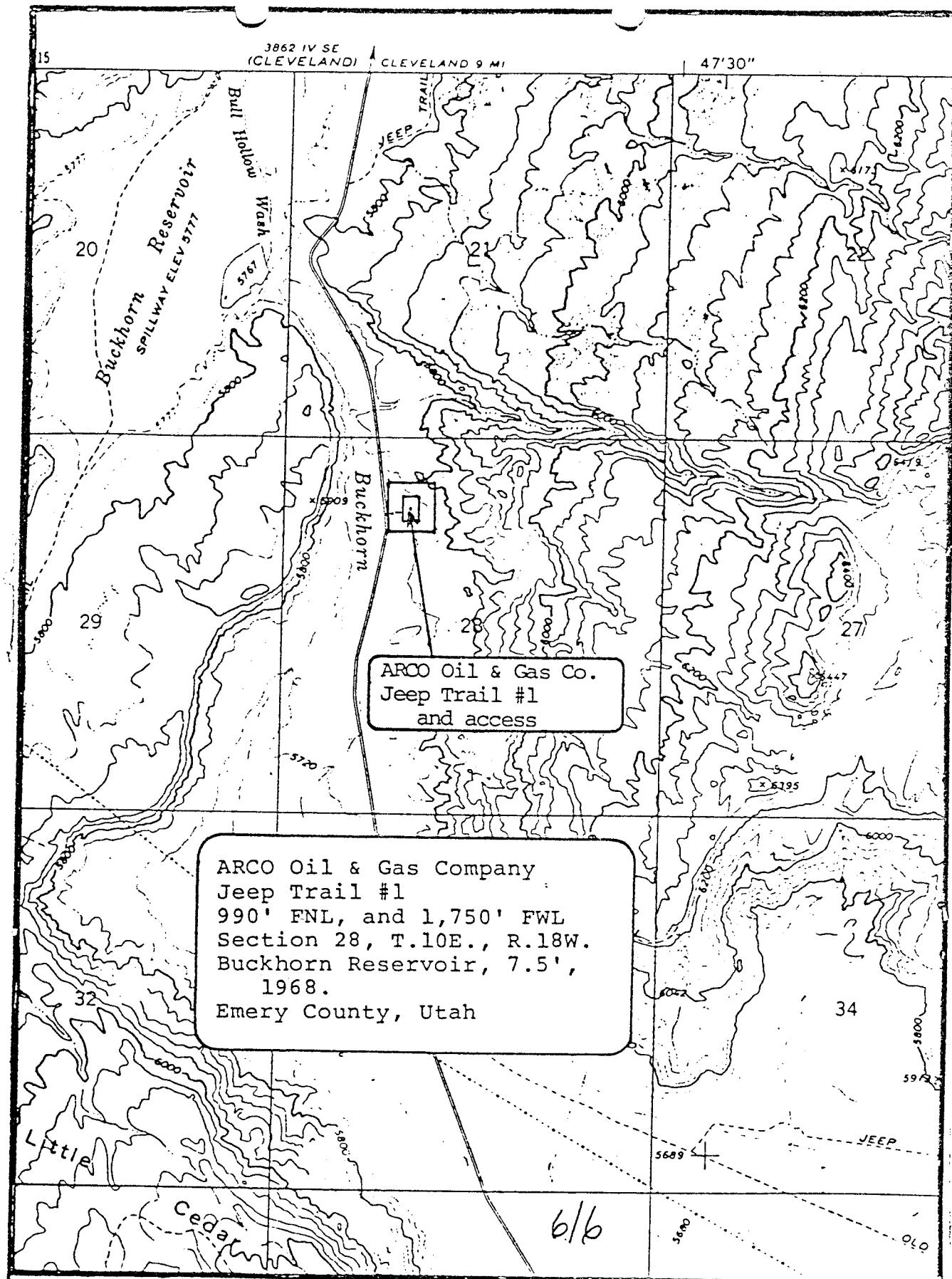
15. Literature Search, Location/Date: ...with Mr. Blaine Miller, BLM Resource Area Archaeologist. Survey #78-37, along the main road used for access, was conducted in 1978 by A.E.R.C. No sites are recorded in the project area.

A files search requested June 8, 1984, with the Division of State History, Salt Lake City, Utah revealed an absence of sites and surveys.

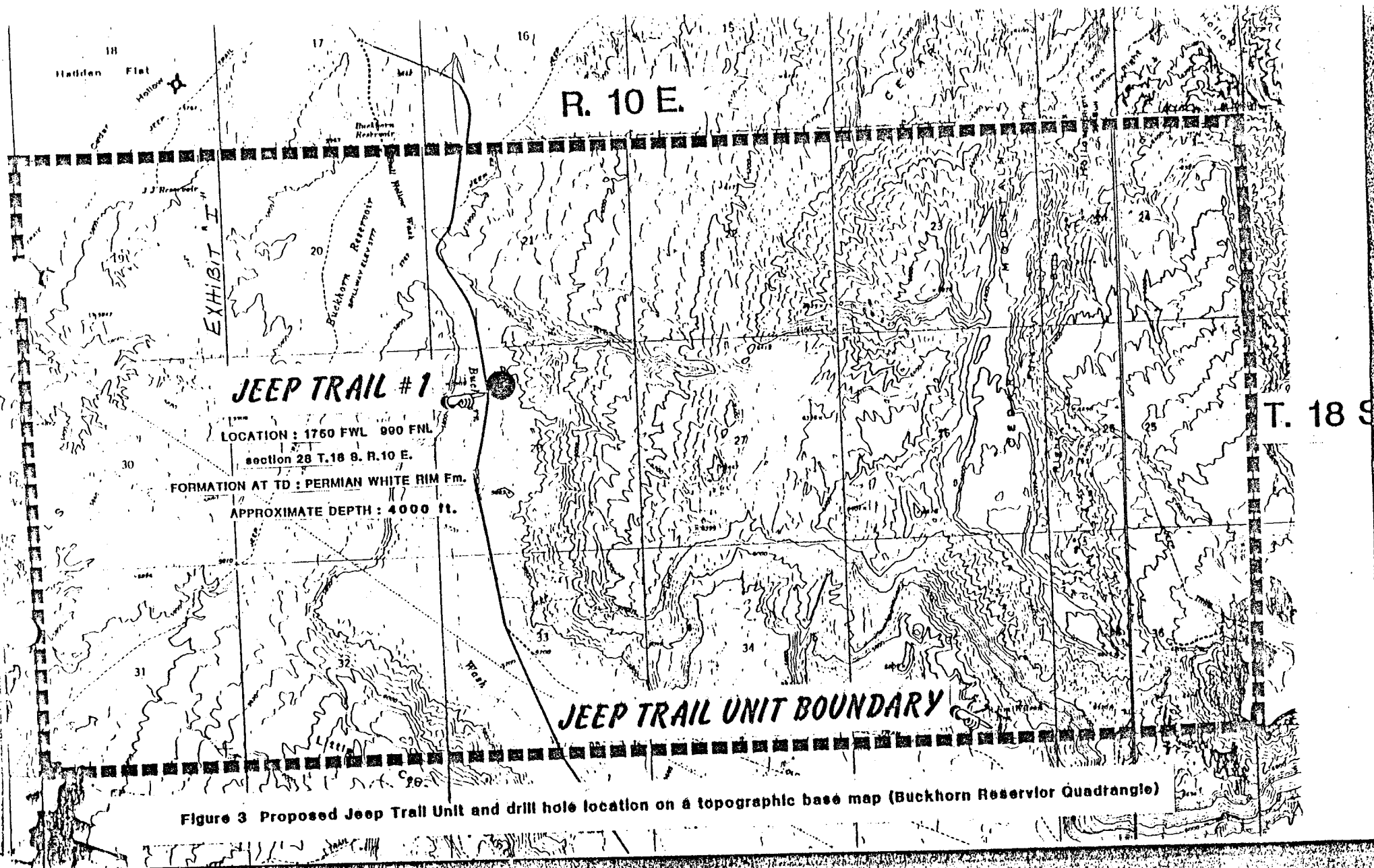
ARCO Oil & Gas Company
Jeep Trail #1
990' FNL, and 1,750' FWL,
Section 28, T.10E., R.18S.
Emery County, Utah



Looking south-southeast at center stake.



END OF EXHIBIT "H"



CONFIDENTIAL

OPERATOR Arco Oil & Gas Co. DATE 7-16-84

WELL NAME Jeep Trail Unit #1

SEC NE NW 28 T 18S R 10E COUNTY Emery

43-015-30202
API NUMBER

Lease
TYPE OF LEASE

POSTING CHECK OFF:

☐

INDEX

☐

HL

☐☐

NID

☐

PI

☐☐

MAP

☐☐

PROCESSING COMMENTS:

Unit well - Approved 7/17/84 (per Teresa BLM)
Need Water permit

APPROVAL LETTER:

SPACING:

☒

A-3

Jeep Trail
UNIT

☐

c-3-a

CAUSE NO. & DATE

☐

c-3-b

☐

c-3-c

SPECIAL LANGUAGE:

Water

☒ RECONCILE WELL NAME AND LOCATION ON APD AGAINST SAME DATA ON PLAT MAP.

☒ AUTHENTICATE LEASE AND OPERATOR INFORMATION

☒ VERIFY ADEQUATE AND PROPER BONDING

☒ AUTHENTICATE IF SITE IS IN A NAMED FIELD, ETC.

☐ APPLY SPACING CONSIDERATION

☐ ORDER _____

☒ UNIT Jeep Trail

☐ c-3-b

☐ c-3-c

☒ CHECK DISTANCE TO NEAREST WELL.

☐ CHECK OUTSTANDING OR OVERDUE REPORTS FOR OPERATOR'S OTHER WELLS.

☒ IF POTASH DESIGNATED AREA, SPECIAL LANGUAGE ON APPROVAL LETTER

☒ IF IN OIL SHALE DESIGNATED AREA, SPECIAL APPROVAL LANGUAGE.

July 18, 1984

Arco Oil and Gas Company
a Division of Atlantic Richfield Co.
P. O. Box 5540
Denver, Colorado 80217

RE: Well No. Jeep Trail Unit #1
NE1/4 Sec. 28, T. 18S, R. 10E
990' FNL, 1750' FVL
Emery County, Utah

Gentlemen:

Approval to drill the above referenced oil well is hereby granted in accordance with Section 40-6-18, Utah Code Annotated, as amended 1983; and predicated on Rule A-3, General Rules and Regulations and Rules of Practice and Procedure, subject to the following stipulations:

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water.

In addition, the following actions are necessary to fully comply with this approval:

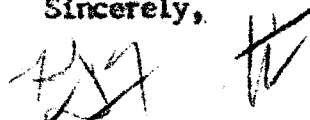
1. Spudding notification to the Division within 24 hours after drilling operations commence.
2. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.
3. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 533-5771, (Home) 298-7695 or R. J. Firth, Associate Director, (Home) 571-6068.
4. Compliance with the requirements and regulations of Rule C-27, Associated Gas Flaring, General Rules and Regulations, Oil and Gas Conservation.

Page 2
Arco Oil and Gas Company
Well No. Jeep Trail Unit #1
July 18, 1984

5. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-015-30202.

Sincerely,



R. J. Firth
Associate Director, Oil & Gas

RJF/as

cc: Branch of Fluid Minerals

Enclosures

REC'D MDO JUL 12 1984

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-26316	
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME NA	
2. NAME OF OPERATOR ARCO Oil and Gas Company, a Division of Atlantic Richfield Company		7. UNIT AGREEMENT NAME Jeep Trail	
3. ADDRESS OF OPERATOR P. O. Box 5540, Denver, Colorado 80217		8. FARM OR LEASE NAME NA	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements) At surface 990' FNL & 1750' FWL (NE1/4 NW1/4) At proposed prod. zone Approx the same		9. WELL NO. #1	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* Approx 8 mi SE of Cleveland, Utah		10. FIELD AND POOL, OR WILDCAT Wildcat	
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 990'		11. SEC., T., E., M., OR BLK. AND SURVEY OR AREA Salt Lake Meridian Sec. 28-18S-10E	
16. NO. OF ACRES IN LEASE 2480		12. COUNTY OR PARISH Emery	
17. NO. OF ACRES ASSIGNED TO THIS WELL 40		13. STATE Utah	
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. NA		20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) Ungraded ground elevation 5748'		22. APPROX. DATE WORK WILL START* July 26, 1984	

RECEIVED

JUL 23 1984

DIVISION OF OIL
GAS & MINING

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36#, K-55,	STC 1400'	Cmt to surf - approx 800 sx
8-3/4"	5-1/2"	14#, K-55,	STC 4015'	Cmt to 1000' above uppermost productive zone, approx 430 sx

Propose to drill to 4015' to test the Moenkopi Fm. This permit is being filed in accordance with Onshore Oil & Gas Order Number 1.

Attachments:

Drilling Program with Exhibits

Surface Use Program with Exhibits

The subject lease expires July 31, 1984. Operations are planned to be conducted over the lease expiration date.

All information regarding this subject is requested to be held **confidential**.

ARCO Oil & Gas is the current lessee of record on the subject lease.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED W.A. Walther, Jr. TITLE Operations Manager DATE 19 July 1984
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY /S/ GENE NODINE TITLE DISTRICT MANAGER DATE 19 JUL 1984
CONDITIONS OF APPROVAL, IF ANY:

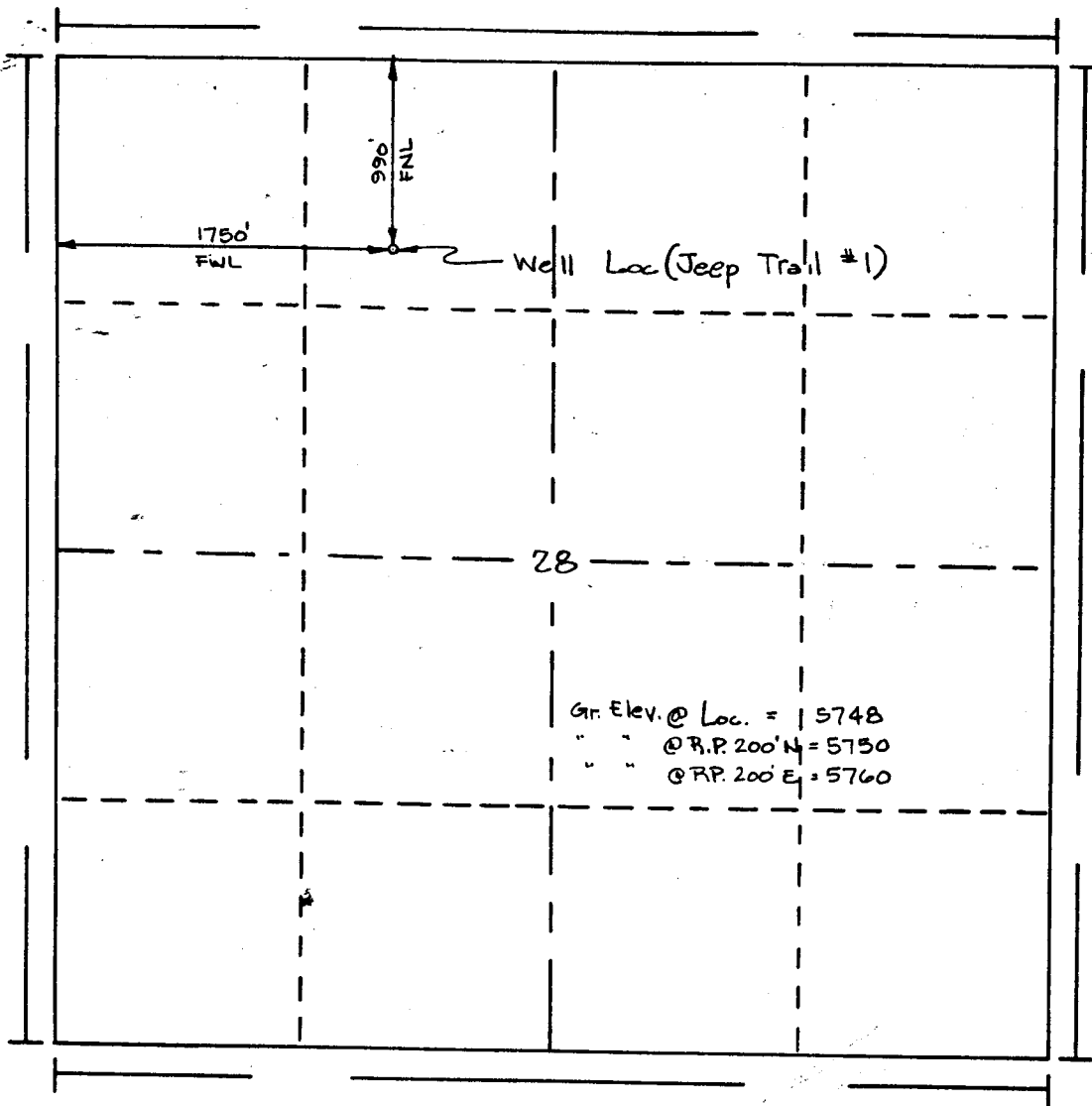
FLARING OR VENTING OF
GAS IS SUBJECT OF NTL 4-A
DATED 1/1/80

CONDITIONS OF APPROVAL ATTACHED



EXHIBIT "3"

R. 10 E.



Scale... 1" = 1000'

Powers Elevation of Denver, Colorado
has in accordance with a request from HARRY ENGLE
for ARCO OIL & GAS.
determined the location of JEEP TRAIL #1
to be 990' FNL & 1750' FWL of Section 28 Township 18 South
Range 10 East of the SALT LAKE Meridian
EMERY County, UTAH

I hereby certify that this plat is an
accurate representation of a correct
survey showing the location of

Date: JUNE 11, 1984

Samuel Stegeman

Licensed Engineer
State of COLORADO



"UTAH exception"

ARCO Oil and Gas Company,
A Division of Atlantic Richfield Company
Well No. Jeep Trail 1
NENW Sec. 28, T. 18 S., R. 10 E.
Emery County, Utah
Lease U-26316

Supplemental Stipulation:

1. If any paleontological resources are found during construction, all work will stop and the Area Manager will be notified.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

3. MIT IN TIME
Other instructions
reverse side.

Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

OIL
WELL ☒ **CONFIDENTIAL** OTHER

CONFIDENTIAL

2. NAME OF OPERATOR
ARCO Oil and Gas Company, Division of Atlantic Richfield Company

3. ADDRESS OF OPERATOR

P.O. Box 5540, Denver, Colorado 80217

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

990' FNL & 1750' FWL (NE/4 NW/4)
Sec 28-T18S-R10E

14. PERMIT NO.

43-015-30202

15. ELEVATIONS (Show whether OF, RT, CR, etc.)

ungraded

5. LEASE DESIGNATION AND SERIAL NO
U-26316

6. IF INDIAN, ADOPTEE OR TRIBE NAME

NA

7. UNIT AGREEMENT NAME
Jeep Trail

8. FARM OR LEASE NAME
NA

9. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R., M., OR BLM, AND
SURVEY OR AREA

28-18S-10E Salt Lake Meridian

12. COUNTY OR PARISH 13. STATE

Emery

Utah

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

☐
☐
☐
☐

PULL OR ALTER CASING

☐
☐
☐
☐

FRACTURE TREAT

MULTIPLE COMPLETION

SHOOT OR ACIDIZE

ABANDON*

REPAIR WELL

CHANGE PLANE

(Other)

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

☐
☐
☐
☐

REPAIRING WELL

☐
☐
☐
☐

FRACTURE TREATMENT

ALTERING CASING

SHOOTING OR ACIDIZING

ABANDONMENT*

(Other) NOTICE OF SPUD

☒

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

This Sundry Notice is a follow-up to verbal Notice of Spud given by Mr. Harry Engel (ARCO) to Mr. Bob Graff (BLM-Moab) at 0930 hrs on 8-1-84. Moved in dry hole digger 7-26-84. Drilled 24" hole to 50' GL; ran 50' of 16" conductor and cemented to surface with 5 yd of redmix on 7-27-84. Commenced to move in J & R Drilling Rig #3 on 7-28, 29 & 30, 1984. Rigged up J & R Drilling Rig #3 on 7-31-84. SPUDDED surface hole at 2345 hrs on 7-31-84. Operations at 0600 hrs on 8-1-84: picking up 8" DC's and drilling.

For any questions regarding this subject, please call Mr. Harry Engel in our drilling department at (303) 293-7305.

RECEIVED

AUG 6 1984

DIVISION OF OIL
GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED

J.M. McCarthy
J.M. McCarthy

TITLE

District Drilling
Superintendent

DATE

1 AUGUST 1984

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN THE
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.)

1. OIL WELL ☒ GAS WELL ☐ OTHER ☐
2. NAME OF OPERATOR
ARCO Oil and Gas Company, Division of Atlantic Richfield Company
3. ADDRESS OF OPERATOR
P.O. Box 5540, Denver, Colorado 80217
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.
See also space 17 below.)
At surface

5. LEASE DESIGNATION AND SERIAL NO.
U-26316
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
NA
7. UNIT AGREEMENT NAME
Jeep Trail
8. FARM OR LEASE NAME
NA
9. WELL NO.
1
10. FIELD AND POOL, OR WILDCAT
Wildcat
11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA
28-18S-10E
12. COUNTY OR PARISH
Emery
13. STATE
Utah

14. PERMIT NO.
43-015-30202
15. ELEVATIONS (Show whether SP, RT, GR, etc.)
ungraded

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐
FRACTURE TREAT ☐
SHOOT OR ACIDIZE ☐
REPAIR WELL ☐
(Other) ☐
PULL OR ALTER CASING ☐
MULTIPLE COMPLETE ☐
ABANDON ☐
CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐
FRACTURE TREATMENT ☐
SHOOTING OR ACIDIZING ☐
(Other) ☒ CHANGE OF OPEN HOLE SIZE
REPAIRING WELL ☐
ALTERING CASING ☐
ABANDONMENT ☐

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

RECEIVED

Open Hole size below 9-5/8" surface pipe is changed from 8-3/4" bit to 7-7/8" bit.

AUG 9 1984

Verbal permission given per discussion between Bob Graff, Petroleum Engineer, and H.R. Engel, ARCO Oil and Gas Company, on 8-6-84.

DIVISION OF OIL
GAS & MINING

I hereby certify that the foregoing is true and correct
SIGNER W.A. Walther, Jr. TITLE Operations Manager DATE 8-6-84
(This space for Federal or State office use)
APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL IF ANY: _____

*See Instructions on Reverse Side



STATE OF UTAH
NATURAL RESOURCES
Water Rights

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dee C. Hansen, State Engineer

1636 West North Temple • Salt Lake City, UT 84116 • 801-533-6071

August 17, 1984

RECEIVED

AUG 17 1984

ARCO Oil & Gas Co. Division of Atlantic Richfield Co.
P.O. Box 5540
Denver, CO 80217

DIVISION OF OIL
GAS & MINING

Dear Applicant:

RE: TEMPORARY APPLICATION
NUMBER 93-3516 (T60131)

Enclosed is a copy of the above numbered approved Temporary Application. This is your authority to construct your works and to divert the water for the uses described.

While this approved application does give you our permission to divert and use water, it does not grant easements through public or private lands in order to gain access to the source nor to convey the water to the place of use, nor does this approval eliminate the need for such other permits as may be required by this Division or any other agency in implementing your diversion.

This application will expire November 30, 1984, and it is expected that no diversion or use of the water will be done after that date unless another proposal has been made and approved.

Your contact with this office, should you need it is with the Area Engineer, Mark Page. The telephone number is (801)637-1303.

Yours truly,

Dee C. Hansen, P. E.
State Engineer

TEMPORARY

DCH:slm

Enclosure

TEMPORARY

APPLICATION TO APPROPRIATE WATER

STATE OF UTAH

Application No. T 6013193-3516

RECEIVED

NOTE:—The information given in the following blanks should be free from explanatory matter, but when necessary, a complete supplementary statement should be made on the following page under the heading "Explanatory."

JUL 13 1984

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, for uses indicated by (X) in the proper box or boxes, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of the Laws of Utah.

STATE ENGINEER
PRICE, UTAH

1. Irrigation ☐ Domestic ☐ Stockwatering ☐ Municipal ☐ Power ☐ Mining ☐ Other Uses ☒ Oil Well Drilling

2. The name of the applicant is ARCO Oil & Gas Co., Division of Atlantic Richfield Co.

3. The Post Office address of the applicant is P.O. Box 5540, Denver, Colorado 80217

4. The quantity of water to be appropriated 12,000 bbls second-foot and/or 2 (two) acre-feet

5. The water is to be used for oil well drilling from 7/23/84 to 10/1/84
(Major Purpose) (Month) (Day) (Month) (Day)

other use period well completion from 8/15/84 to 11/30/84
(Minor Purpose) (Month) (Day) (Month) (Day)

and stored each year (if stored) from _____ to _____
(Month) (Day) (Month) (Day)

6. The drainage area to which the direct source of supply belongs is _____
(Leave Blank)

7. The direct source of supply is* Huntington Creek
(Name of stream or other source)

which is tributary to _____, tributary to _____

*Note.—Where water is to be diverted from a well, a tunnel, or drain, the source should be designated as "Underground Water" in the first space and the remaining spaces should be left blank. If the source is a stream, a spring, a spring area, or a drain, so indicate in the first space, giving its name, if named, and in the remaining spaces, designate the stream channels to which it is tributary, even though the water may sink, evaporate, or be diverted before reaching said channels. If water from a spring flows in a natural surface channel before being diverted, the direct source should be designated as a stream and not a spring.

8. The point of diversion from the source is in Emery County, situated at a point*
S. 1780 ft. & W. 2240 ft. from NE Cor. Sec. 33, T18S, R9E, SLB&M,
(5½ miles East of Castle Dale, Utah) See Exhibit #1
Hadden Hole Quad

*Note.—The point of diversion must be located definitely by course and distance or by giving the distances north or south, and east or west with reference to a United States land survey corner or United States mineral monument, if within a distance of six miles of either, or if at a greater distance, to some prominent and permanent natural object. No application will be received for filing in which the point of diversion is not defined definitely.

9. The diverting and carrying works will consist of a small pumping basin, pump with vacuum trucks.

10. If water is to be stored, give capacity of reservoir in acre-feet _____ height of dam _____
area inundated in acres _____ legal subdivision of area inundated _____

11. If application is for irrigation purposes, the legal subdivisions of the area irrigated are as follows:
Not for irrigation purposes

_____ Total _____ Acres

12. Is the land owned by the applicant? Yes _____ No X If "No," explain on page 2.

13. Is this water to be used supplementally with other water rights? Yes _____ No X
If "yes," identify other water rights on page 2.

14. If application is for power purposes, describe type of plant, size and rated capacity _____

15. If application is for mining, the water will be used in _____ Mining District at
the _____ mine, where the following ores are mined _____

16. If application is for stockwatering purposes, number and kind of stock watered _____

17. If application is for domestic purposes, number of persons _____, or families _____

18. If application is for municipal purposes, name of municipality _____

19. If application is for other uses, include general description of proposed uses to provide the necessary water in drilling one (1) oil well, as shown on the attached map, Exhibit #2

20. Give place of use by legal subdivision of the United States Land Survey for all uses described in paragraphs 14 to 19, incl. NE 1/4 NW 1/4 Sec. 28-T18S-R10E Emery County, Utah

ARCO Oil & Gas Company Jeep Trail #1 Well
S. 1000 ft. & E. 1740 ft. from NW Cor. Sec. 28, T18S, R10E, SLB&M.

21. The use of water as set forth in this application will consume 2.0 second-feet and/or acre-feet of water and _____ second feet and/ or acre feet will be returned to the natural stream or source at a point described as follows: The applicant will use only what is necessary to drill and complete the well described in item 20.

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AUG 17 1984

DIVISION OF OIL
GAS & MINING

EXPLANATORY

The following additional facts are set forth in order to define more clearly the full purpose of the proposed application:

The well described in item 20 will spud approximately July 23, 1984.

Item 12. The location of the water source is administered by Huntington/
Cleveland Irrigation Company. Contact: Mr. Mar Grange at (801)687-9922

Exhibit #1 is a map showing the water source

Exhibit #2 is a map showing the proposed well location

The water will be trucked to the well site.

For any questions regarding this subject, please call
Mr. Harry Engel of our Drilling Department at (303)293-7305.

(Use page 4 if additional explanatory is needed.)

The quantity of water sought to be appropriated is limited to that which
can be beneficially used for the purpose herein described

W.A. Waither, Jr. *KUP*
W.A. Waither, Jr. Signature of Applicant*
Operations Manager

*If applicant is a corporation or other organization, signature must be the name of such corporation or organization by its proper officer, or in the name of the partnership by one of the partners, and the names of the other partners shall be listed. If a corporation or partnership, the affidavit below need not be filled in. If there is more than one applicant, a power of attorney, authorizing one to act for all, should accompany the Application.

DECLARATION OF CITIZENSHIP

STATE OF UTAH, }
County of..... } ss

On the day of, 19....., personally appeared before me, a
notary public for the State of Utah, the above applicant who, on oath, declared that he is a citizen of the United States,
or has declared his intention to become such a citizen.

My commission expires:

TEMPORARY

Notary Public

FEES FOR APPLICATIONS TO APPROPRIATE WATER IN UTAH

Flow rate — c.f.s.	Cost	
0.0 to 0.1	\$ 15.00	
over 0.1 to 0.5	30.00	
over 0.5 to 1.0	45.00	
over 1.0 to 15.0	45.00	plus \$7.50 for each cfs above the first cubic
over 15.0	150.00	foot per second.

Storage — acre-feet		
0 to 20	22.50	
over 20 to 500	45.00	
over 500 to 7500	45.00	plus \$7.50 for each 500 a.f. above the first
over 7500	150.00	500 acre feet.

(This section is not to be filled in by applicant)

STATE ENGINEER'S ENDORSEMENTS

1. July 13, 1984 Application received by mail over counter in State Engineer's office by SP
2. Priority of Application brought down to, on account of
3. 7-26-84 Application fee, \$15.00, received by J.H. Rec. No. 16222
4. Application microfilmed by Roll No.
5. 7-26-84 Indexed by am Platted by
6. 7-18-84 Application examined by SP
7. Application returned, or corrected by office
8. Corrected Application resubmitted by mail over counter to State Engineer's office.
9. Application approved for advertisement by
10. Notice to water users prepared by
11. Publication began; was completed
Notice published in
12. Proof slips checked by
13. Application protested by
14. Publisher paid by M.E.V. No.
15. Hearing held by
16. Field examination by
17. 7-18-84 Application designated for approval SP SG
rejection
18. 8/17/84 Application copied or photostated by slm proofread by
19. 8/17/84 Application approved
~~rejected~~
20. Conditions:

This Application is approved, subject to prior rights, as follows:

- a. Actual construction work shall be diligently prosecuted to completion.
- b. Proof of Appropriation shall be submitted to the State Engineer's office by NPR
- c. TEMPORARY APPROVAL -- EXPIRES November 30, 1984.

Dee C. Hansen
Dee C. Hansen, P.E., State Engineer

21. Time for making Proof of Appropriation extended to
22. Proof of Appropriation submitted.
23. Certificate of Appropriation, No., issued

TEMPORARY

Application No. T 60131

93-3516

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
(FORM 9-329)
(2/76)
OMB 42-RO 356

MONTHLY REPORT
OF
OPERATIONS

Lease No. U-26316
Communitization Agreement No. _____
Field Name Wildcat
Unit Name _____
Participating Area _____
County Emery State UT
Operator Atlantic Richfield Co.
☐ Amended Report (Jeep Trail #1)

The following is a correct report of operations and production (including status of all unplugged wells) for the month of July, 19 84

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & 1/4 of 1/4	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
1	NE NW Sec. 28	18S	10E	DRG	0	0	0	0	This well was spudded on Jul 31, 1984. Please see attached drilling report. Information Restricted- Please keep confidential. AUG 20 1984

*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLs)	Gas (MCF)	Water (BBLs)
*On hand, Start of Month	0	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Produced	0	0	0
*Sold	0	0	XXXXXXXXXXXXXXXXXX
*Spilled or Lost	0	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXXX	0	XXXXXXXXXXXXXXXXXX
*Used on Lease	0	0	XXXXXXXXXXXXXXXXXX
*Injected	0	0	0
*Surface Pits	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	0
*Other (Identify)	0	0	0
*On hand, End of Month	0	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*API Gravity/BTU Content	0	0	XXXXXXXXXXXXXXXXXX

Authorized Signature: B. R. Still Address: P.O. Box 5540, Denver, CO 80217
Title: Supervisor, Operations Info. Group Page 1 of 1

TIGHT HOLE

Form 3160-5
November 1983
Formerly 9-331

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN THE
(Other instruction
reverse side)

Form approved
Budget Bureau No. 1004-0135
Expires August 31, 1985

2. LEASE DESIGNATION AND SERIAL NO.

U-26316

3. IF INDIAN, ALLOTTEE OR TRIBE NAME

NA

4. UNIT AGREEMENT NAME

Jeep Trail

5. FARM OR LEASE NAME

NA

6. WELL NO.

1

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R., M., OR S.E. AND
SUBDIVISION OR AREA

28-18S-10E

14. PERMIT NO.

43-015-30202

15. ELEVATIONS (Show whether SP, RT, CR, etc.)

5748'

12. COUNTY OR PARISH

Emery

13. STATE

Utah

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

☐
☐
☐
☐

PULL OR ALTER CASING

☐
☐
☐
☐

FRACTURE TREAT

MULTIPLE COMPLETE

SHOOT OR ACIDIZE

ABANDON*

REPAIR WELL

CHANGE PLANE

(Other)

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

☐
☐
☐
☐

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(Note: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Drilled ahead to 1315'. RU and ran 33 jts 9-5/8", 36#, K-55, STC casing and set @ 1314' KB. Cemented as follows: 1000 gal flush followed by 320 sx lite with 12% thixad, 2% CaCl₂, 4#/sx hiseal, 9% ziagel (2.17 cuft/sx) and followed by 125 sx Class "H" with 12% thixad, 2% CaCl₂ + 4#/sx hiseal. Circulate 50 bbls cement to pit. Pump 50 sx Class "H" with 2% CaCl₂ through 1" tubing for top job. Tested blind rams to 1700# - OK, pipe rams to 1700# - OK. Drilled cement and drilling ahead 8-10-84.

RECEIVED

AUG 22 1984

DIVISION OF OIL
GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED

W.A. Walther Jr.

TITLE

Operations Manager

DATE

8-17-84

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations.



TICKET NO. 86850300
22-AUG-84
VERNAL

FORMATION TESTING SERVICE REPORT

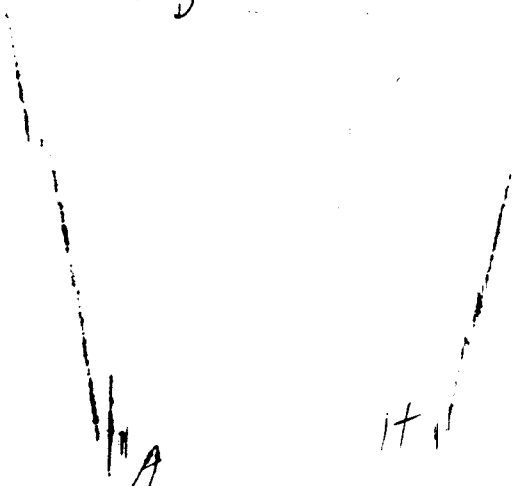
LEGAL LOCATION SEC. - TWP. - RMC.	LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	COUNTY	ENERGY	STATE	UTAH	SM
28-185-10E					WILDCAT				

GAUGE NO: 649 DEPTH: 3234.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	1560	1579.3			
B	INITIAL FIRST FLOW	9	10.4	15.0	15.0	F
C	FINAL FIRST FLOW	9	10.4			
C	INITIAL FIRST CLOSED-IN	9	10.4	45.0	45.0	C
D	FINAL FIRST CLOSED-IN	27	23.1			
E	INITIAL SECOND FLOW	9	14.2	90.0	90.0	F
F	FINAL SECOND FLOW	9	11.3			
F	INITIAL SECOND CLOSED-IN	9	11.3	180.0	180.0	C
G	FINAL SECOND CLOSED-IN	27	28.7			
H	FINAL HYDROSTATIC	1560	1570.0			

BC E F
D

6 7 4 4



868503-4426

GAUGE NO: 4426 DEPTH: 3354.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	1641	1645.8			
B	INITIAL FIRST FLOW	66	73.9	15.0	15.0	F
C	FINAL FIRST FLOW	66	69.5			
C	INITIAL FIRST CLOSED-IN	66	69.5	45.0	45.0	C
D	FINAL FIRST CLOSED-IN	94	82.7			
E	INITIAL SECOND FLOW	66	78.6	90.0	90.0	F
F	FINAL SECOND FLOW	66	70.1			
F	INITIAL SECOND CLOSED-IN	66	70.1	180.0	180.0	C
G	FINAL SECOND CLOSED-IN	94	89.6			
H	FINAL HYDROSTATIC	1641	1642.5			

EQUIPMENT & HOLE DATA

FORMATION TESTED: MOENKOPI
NET PAY (ft): 14.0
GROSS TESTED FOOTAGE: 102.0
ALL DEPTHS MEASURED FROM: KELLY BUSHING
CASING PERFS. (ft): _____
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 5740
TOTAL DEPTH (ft): 3357.0
PACKER DEPTH(S) (ft): 3249, 3255
FINAL SURFACE CHOKE (in): _____
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.40
MUD VISCOSITY (sec): 57
ESTIMATED HOLE TEMP. (°F): _____
ACTUAL HOLE TEMP. (°F): 98 @ 3355.0 ft

TICKET NUMBER: 86850300

DATE: 8-18-84 TEST NO: 1

TYPE DST: OPEN HOLE

HALLIBURTON CAMP:
VERNAL

TESTER: R. RIPPLE

WITNESS: RIP DOUGLASS

DRILLING CONTRACTOR:
J. AND R. DRILLING #3

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
MUD PIT	<u>1.560 @ 70 °F</u>	<u>2363</u> ppm
SAMPLER	<u>1.800 @ 80 °F</u>	<u>1757</u> ppm
	<u> @ °F</u>	<u> </u> ppm
	<u> @ °F</u>	<u> </u> ppm
	<u> @ °F</u>	<u> </u> ppm
	<u> @ °F</u>	<u> </u> ppm

SAMPLER DATA

Pstg AT SURFACE: 0
cu.ft. OF GAS: 0.03
cc OF OIL: 0
cc OF WATER: 0
cc OF MUD: 1600
TOTAL LIQUID cc: 1600

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): @ °F
GAS/OIL RATIO (cu.ft. per bbl):
GAS GRAVITY:

CUSHION DATA

TYPE AMOUNT WEIGHT

RECOVERED:

18 FEET OF DRILLING MUD














MEASURED FROM
TESTER VALVE

REMARKS:

3 TO 5% POROSITY.

TICKET NO: 86850300

MEASURED FROM
TESTER VALVE

		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.500	3.826	2866.0	
3		DRILL COLLARS.....	5.750	2.375	293.6	
50		IMPACT REVERSING SUB.....	6.000	3.000	1.0	3160.0
3		DRILL COLLARS.....	5.750	2.375	59.6	
5		CROSSOVER.....	6.063	2.500	1.2	
13		DUAL CIP SAMPLER.....	5.000	0.750	6.8	
60		HYDROSPRING TESTER.....	5.000	0.750	5.0	3232.0
60		AP RUNNING CASE.....	5.000	2.250	4.1	3234.0
15		JAR.....	5.000	1.750	5.0	
16		VR SAFETY JOINT.....	5.000	1.000	2.8	
70		OPEN HOLE PACKER.....	7.000	1.530	5.8	3249.0
70		OPEN HOLE PACKER.....	7.000	1.530	5.8	3255.0
19		ANCHOR PIPE SAFETY JOINT.....	5.750	1.500	4.0	
20		FLUSH JOINT ANCHOR.....	5.750	2.870	28.0	
5		CROSSOVER.....	6.000	3.250	1.3	
3		DRILL COLLARS.....	5.750	2.375	59.6	
5		CROSSOVER.....	6.000	2.250	1.0	
20		FLUSH JOINT ANCHOR.....	5.750	2.870	2.0	
61		BLANKED-OFF RUNNING CASE.....	5.750		4.1	3354.0
TOTAL DEPTH					3357.0	

EQUIPMENT DATA

EQUATIONS FOR DST LIQUID WELL ANALYSIS

Transmissibility	$\frac{kh}{\mu} = \frac{162.6 QB}{m}$	$\frac{\text{md-ft}}{\text{cp}}$
Indicated Flow Capacity	$kh = \frac{kh}{\mu} \mu$	md-ft
Average Effective Permeability	$k = \frac{kh}{h}$	md
Damage Ratio	$DR = .183 \frac{P^* - P_f}{m}$	—
Theoretical Potential w Damage Removed	$Q_1 = Q DR$	BPD
Approx. Radius of Investigation	$r_i = 4.63 \sqrt{kt}$	ft

EQUATIONS FOR DST GAS WELL ANALYSIS

Indicated Flow Capacity	$kh = \frac{1637 Q_g T}{m}$	md-ft
Average Effective Permeability	$k = \frac{kh}{h}$	md
Skin Factor	$S = 1.151 \left[\frac{m(P^*) - m(P_f)}{m} - \text{LOG} \frac{k(t/60)}{\phi \mu c_1 r_w^2} + 3.23 \right]$	—
Damage Ratio	$DR = \frac{m(P^*) - m(P_f)}{m(P^*) - m(P_f) - 0.87 mS}$	—
Indicated Flow Rate (Maximum)	$AOF_1 = \frac{Q_g m(P^*)}{m(P^*) - m(P_f)}$	MCFD
Indicated Flow Rate (Minimum)	$AOF_2 = Q_g \sqrt{\frac{m(P^*)}{m(P^*) - m(P_f)}}$	MCFD
Approx. Radius of Investigation	$r_i = 0.032 \sqrt{\frac{k(t/60)}{\phi \mu c_1}}$	ft

ARCO Oil and Gas Company
Rocky Mountain District
707 17th Street
Mailing address: P.O. Box 5540
Denver, Colorado 80217
Telephone 303 575 7000



RECEIVED

SEP 17 1984

DIVISION OF OIL
GAS & MINING

September 15, 1984

State of Utah
Department of Natural Resources
Division of Oil, Gas & Mining
4241 State Office Building
Salt Lake City, UT 84114

Re: Monthly Report of Operations
Well No. Jeep Trail #1
NE NW, Sec. 28-18S-10E
Emery, Utah

Gentlemen:

Attached, in duplicate, is the Monthly Report of
Operations for the month of August,
1984, on the subject well.

This well was spudded on July 31, 1984.

Very truly yours,

B.R. Still, Supervisor
Operations Information Group

BRS:af

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

(FORM 9-329)

(2/76)

OMB 42-RO 356

MONTHLY REPORT
OF
OPERATIONS

Lease No. U-26316

Communitization Agreement No. Wildcat

Field Name _____

Unit Name _____

Participating Area _____

County Emery State UT

Operator Atlantic Richfield Co.

☐ Amended Report (Jeep Trail #1)

The following is a correct report of operations and production (including status of all unplugged wells) for the month of August, 19 84

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & 1/4 of 1/4	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
1	NE NW Sec. 28	18S	10E	DRG	0	0	0	0	This well was spudded on July 31, 1984. Please see attached drilling report. Now waiting to be completed. CONFIDENTIAL SEP 17 1984

*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLs)	Gas (MCF)	Water (BBLs)
*On hand, Start of Month	0	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Produced	0	0	0
*Sold	0	0	XXXXXXXXXXXXXXXXXX
*Spilled or Lost	0	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXXX	0	XXXXXXXXXXXXXXXXXX
*Used on Lease	0	0	XXXXXXXXXXXXXXXXXX
*Injected	0	0	0
*Surface Pits	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	0
*Other (Identify)	0	0	0
*On hand, End of Month	0	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*API Gravity/BTU Content	0	0	XXXXXXXXXXXXXXXXXX

Authorized Signature: B. R. Steel

Address: P.O. Box 5540, Denver, CO 80217

Title: Supervisor, Operations Info. Group

Page 1 of 1

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

(FORM 9-329)

(2/76)

OMB 42-RO 356

MONTHLY REPORT
OF
OPERATIONS

Lease No. U-26316

Communitization Agreement No. Wildcat

Field Name _____

Unit Name _____

Participating Area _____

County Emery State UT

Operator Atlantic Richfield Co.

☐ Amended Report (Jeep Trail #1)

The following is a correct report of operations and production (including status of all unplugged wells) for the month of September, 19 84

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & 1/4 of 1/4	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
1	NE NW Sec. 28	18S	10E	DRG	0	0	0	0	This well was spudded on Jul 31, 1984. Please see attached drilling report. Dropped from Report 8/25-27, 84. Getting ready for completion

CONFIDENTIAL INFORMATION

*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLs)	Gas (MCF)	Water (BBLs)
*On hand, Start of Month	0	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Produced	0	0	0
*Sold	0	0	XXXXXXXXXXXXXXXXXX
*Spilled or Lost	0	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXXX	0	XXXXXXXXXXXXXXXXXX
*Used on Lease	0	0	XXXXXXXXXXXXXXXXXX
*Injected	0	0	0
*Surface Pits	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	0
*Other (Identify)	0	0	0
*On hand, End of Month	0	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*API Gravity/BTU Content	0	0	XXXXXXXXXXXXXXXXXX

Authorized Signature: _____ Address: P.O. Box 5540, Denver, CO 80217

Title: Supervisor, Operations Info. Group Page 1 of 1

TIGHT HOLE
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN THE CAPS
Other instructions on the
reverse side.

Form approved
Budget Bureau No. 1004-0135
Expires August 31, 1985

LEASE DESIGNATION AND SERIAL NO
U-26316

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.

1. IF INDIAN, AGENT OR TRIBE NAME

NA

2. UNIT AGREEMENT NAME
Jeep Trail

3. NAME OF LEASE NAME

1

4. WELL NO.

Wildcat

5. FIELD AND POOL, OR WILDCAT

Wildcat

6. SEC., T., R., NE, OR S.E., AND
SURVEY OR AREA

28-18S-10E

7. PERMIT NO.

43-015-30202

8. ELEVATIONS (Show whether of, ft., or, m.)

5748'

9. COUNTY OR PARISH; 10. STATE

Emery

Utah

11. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREAT

MULTIPLE COMPLETE

FRACTURE TREATMENT

ALTERING CASING

SHOOT OR ACIDIZE

ABANDON*

SHOOTING OR ACIDIZING

ABANDONMENT*

REPAIR WELL

CHANGE PLANE

(Other) PRODUCTION CASING

(Other)

(Note: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any
proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones per-
tinent to this work.)

Drilled ahead to 3250'. Core #1 Moenkopi 3250'-3300'. Core #2 Moenkopi
3302'-3320'. DST #1 Moenkopi 3255'-3357'. Core #3 Moenkopi 3357'-3394'.
Core #4 3495'-3524'. DST #2 Moenkopi 3475'-3524'. Drilled to 3955' TD.
Logged. RU and ran 94 jts 5-1/2", 17# & 15.5#, K-55 & J-55 casing and
set @ 3954'KB. Cemented with 15 bbls water ahead followed by 200 sx lite
(12.5 ppg) and followed with 150 sx Class "H" (15.6 ppg). Good circulation.
Floats held.

Released rig 8-26-84.

Waiting on Completion.

RECEIVED

OCT 3 1984

DIVISION OF OIL
GAS & MINING

13. I hereby certify that the foregoing is true and correct

SIGNER

L.B. Morse

TITLE

Operations Manager

DATE

9-25-84

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL IF ANY:

*See Instructions on Reverse Side

TIGHT HOLE
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPL
Other instructions
reverse side.

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985
LEASE DESIGNATION AND SERIAL NO
U-26316

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.)

CONFIDENTIAL

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	7. UNIT ASSIGNMENT NAME Jeep Trail
2. NAME OF OPERATOR ARCO Oil and Gas Company, Division of Atlantic Richfield Company	8. FARM OR LEASE NAME NA
3. ADDRESS OF OPERATOR P.O. Box 5540, Denver, Colorado 80217	9. WELL NO. 1
4. LOCATION OF WELL. Report location clearly and in accordance with any State requirements. (See also space 17 below.) At surface 990' FNL & 1750' FWL (NE/4 NW/4)	10. FIELD AND POOL, OR WILDCAT Wildcat
	11. SEC., T., R., M., OR BLM. AND SURVEY OR AREA 28-18S-10E
14. PERMIT NO. 43-105-30202	15. ELEVATIONS (Show whether SP, RT, OR, OR.) 5748' (ungraded ground elevation)
	12. COUNTY OR PARISH; 13. STATE Emery Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>
FRACTURE TREAT <input checked="" type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>
SHOOT OR ACIDIZE <input checked="" type="checkbox"/>	ABANDON <input checked="" type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANE <input type="checkbox"/>
(Other) <input type="checkbox"/>	

SUBSEQUENT REPORT OF:

WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT <input type="checkbox"/>
(Other) <input type="checkbox"/>	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

1. MIRU completion rig. Perforate 3595'-3618' and 3627'-3660' and test. Fracture stimulate with 18,000# sand and retest.
2. Abandon the perforations 3595'-3618' and 3627'-3660' as follows:
 - A. Set a retainer on wireline at 3580'
 - B. Squeeze below the retainer with 75 sx Class "H" neat cement and spot 2 bbls of cement on top of the retainer.
 - C. Pick up workstring to 3520' and reverse out.
3. Proceed to test the next interval 3408'-3430'. This interval will probably be fracture treated.

NOTE: The above plug procedure was discussed with Mr. Bob Graff, BLM, Moab, and Mr. Jim Onisko, ARCO, and agreed to on 10-5-84.

Federal approval of this action is required before commencing operations.

ACCEPTED
APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 10/11/84
BY: John R. Baya

OCT 10 1984

18. I hereby certify that the foregoing is true and correct

SIGNER <i>John R. Baya</i>	TITLE Operations Manager	DIVISION OF OIL GAS & MINING	DATE 10-5-84
L.B. Morse			

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

TIGHT HOLE
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN THE DATE
Other instructions on the
reverse side.

Form approved
Budget Bureau No. 1004-0135
Expires August 31, 1985

LEASE DESIGNATION AND SERIAL NO
U-26316
IF INDIAN, ADOPTED OR TRIBE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.

1. ☒ OIL WELL ☐ GAS WELL ☐ OTHER

2. NAME OF OPERATOR
ARCO Oil and Gas Company, Division of Atlantic Richfield Company

3. ADDRESS OF OPERATOR
P.O. Box 5540, Denver, Colorado 80217

4. LOCATION OF WELL Report location clearly and in accordance with any State requirements.
See also space 17 below.
AT SURFACE
990' FNL & 1750' FWL (NE/4 NW/4)

5. ELEVATIONS (Show number of feet)
5748' (ungraded ground elevation)

6. PERMIT NO.
43-105-30202

7. DIVISION OF OIL & GAS MINING

8. UNIT AGREEMENT NAME
Jeep Trail

9. FARM OR LEASE NAME
NA

10. WELL NO.
1

11. FIELD AND POOL, OR WILDCAT
Wildcat

12. SEC. T. R. M. OR ALN. AND
SURVEY OR AREA
28-18S-10E

13. COUNTY OR PARISH 14. STATE
Emery Utah

15. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	<input type="checkbox"/>	WATER SHUT-OFF	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	FRACTURE TREATMENT	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	SHOOTING OR ACIDIZING	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	(Other)	<input type="checkbox"/>
ABANDON*	<input checked="" type="checkbox"/>	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	
CHANGE PLANS	<input type="checkbox"/>		

16. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

NOTE: 1. Verbal approval of this procedure was given to Jim Onisko, ARCO, by Bob Graff, BLM Moab.

2. Current well configuration: 16" @ 60', 9-5/8" @ 1315', cemented to surface; 5-1/2" @ 3954' cemented to 2000'; PBD (retainer) 3398'; perf selective intervals 3253'-3384'.

Procedure:

1. Set retainer at 3200'. Squeeze with 75' cf cement. Leave 50' cement on top of retainer.
2. Shoot 4 holes at 1300'. Set retainer at 1200'. Cement with a calculated volume to fill 200' of 5-1/2" x 9-5/8" annulus. Leave cement in 5-1/2" casing from 1200' to 1300'.
3. Set a plug from 100' to surface.
4. Cut off casing 3'-4' below ground level.
5. Install 1/2" plate over casings and bead weld the required information onto the plate. This plate will be used in lieu of standard dry hole marker.

18. I hereby certify that the foregoing is true and correct

SIGNER J. B. Morse TITLE Operations Manager DATE 10-26-84

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____

CONDITIONS OF APPROVAL IF ANY:

Federal approval of this action is required before commencing operations.

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING

DATE: 11/1/84

*See Instructions on Reverse Side

ARCO Oil and Gas Company
Rocky Mountain District
707 17th Street
Mailing address: P.O. Box 5540
Denver, Colorado 80217
Telephone 303 293 4600



November 9, 1984

RECEIVED

State of Utah
Department of Natural Resources
Division of Oil, Gas & Mining
4241 State Office Building
Salt Lake City, UT 84114

NOV 13 1984

DIVISION OF OIL
GAS & MINING

Re: Monthly Report of Operations
Well No. Jeep Trail #1
NE NW Sec. 28-18S-10E
Emery, Utah

Gentlemen:

Attached, in duplicate, is the Monthly Report of
Operations for the month of October,
1984, on the subject well.

This well was spudded on July 31, 1984.

Very truly yours,

B. R. Still
Supervisor, Operations Info. Group

BRS:af

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Form 3160-6
(November 1983)
(Formerly 9-329)

MONTHLY REPORT
OF
OPERATIONS

Lease No. U-26316

Communitization Agreement No. _____

Field Name Wildcat

Unit Name _____

Participating Area _____

County Emery State UtahOperator Atlantic Richfield Company☐ Amended Report (Jeep Trail #1)

The following is a correct report of operations and production (including status of all unplugged wells) for the month of October, 19 84

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396d), regulation (43 CFR 3162.4-3), and the terms of the lease. Failure to report can result in the assessment of liquidated damages, (43 CFR 3160), penalties, shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (43 CFR 3160).

Well No.	Sec. & 1/4 of 1/4	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
1	NE NW Sec. 28	18S	10E	P&A	0	0	0	0	This well was spudded on July 31, 1984. Please see attached drilling report. Final Report Well P & A on 10/27/84.

RECEIVED

NOV 13 1984

DIVISION OF OIL
GAS & MINING

CONFIDENTIAL INFORMATION

*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLs)	Gas (MCF)	Water (BBLs)
*On hand, Start of Month	0	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Produced	0	0	0
*Sold	0	0	XXXXXXXXXXXXXXXXXXXX
*Spilled or Lost	0	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXXXXX	0	XXXXXXXXXXXXXXXXXXXX
*Used on Lease	0	0	XXXXXXXXXXXXXXXXXXXX
*Injected	0	0	0
*Surface Pits	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	0
*Other (Identify)	0	0	0
*On hand, End of Month	0	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*API Gravity/BTU Content	0	0	XXXXXXXXXXXXXXXXXXXX

Authorized Signature: B. R. StielAddress: P.O. Box 5540, Denver, CO 80217Title: Supervisor, Operations Info. GroupPage 1 of 1

TIGHT HOLE
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPL
(Other instructions
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-26316	
2. NAME OF OPERATOR ARCO Oil and Gas Company, Division of Atlantic Richfield Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME NA	
3. ADDRESS OF OPERATOR P.O. Box 5540, Denver, Colorado 80217		7. UNIT AGREEMENT NAME Jeep Trail	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 990' FNL & 1750' FWL (NE/4 NW/4)		8. FARM OR LEASE NAME NA	
14. PERMIT NO. 43-105-30202		9. WELL NO. 1	
15. ELEVATIONS (Show whether DP, RT, GR, etc.) 5748'		10. FIELD AND POOL, OR WILDCAT Wildcat	
		11. SEC., T., R., M., OR S.E. AND SURVEY OR AREA 28-18S-10E	
		12. COUNTY OR PARISH Emery	13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐
FRACTURE TREAT ☐
SHOOT OR ACIDIZE ☐
REPAIR WELL ☐
(Other) ☐

PULL OR ALTER CASING ☐
MULTIPLE COMPLETE ☐
ABANDON* ☐
CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐
FRACTURE TREATMENT ☐
SHOOTING OR ACIDIZING ☐
(Other) ☐

REPAIRING WELL ☐
ALTERING CASING ☐
ABANDONMENT* ☒

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Load hole with KCL water. POH with tubing. Set retainer @ 3200'. Squeeze with 75 sx Class "G" neat. Pull out of retainer, left 50' cement on top of same. POH. Shot 4 holes @ 1300'. Set retainer on WL @ 1222'. Break circld down tubing with returns on 9-5/8" x 5-1/2" annulus. Pumped 150 sx Class "G" and displaced to retainer. Pull out of retainer and reverse out. Set 100' plug in top of 5-1/2" casing with Class "H" neat. Cut off wellhead and casing. Dump 10 sx Class "H" in 5-1/2" x 9-5/8" casing. Weld on "underground" DHM @ 2'8" below GL.

Released rig 10-27-84.

RECEIVED
DEC 05 1984

DIVISION OF
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED

L.R. Morse
L.R. Morse

TITLE

Operations Manager

DATE

11-26-84

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

ACCEPTED
APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

*See Instructions on Reverse Side

DATE
BY: *John R. Bay*

8

Jeep Trail #1
NE NW Section 28-18S-10E
Emery County, Utah

10/27-29 3955

Day-27 PBD: Surf - FINAL REPORT - WELL P & A 10/27/84.
(5-1/2" @ 3954')

Bled off tbg & csg press to 0 psi. Load hole w/KCl wtr. POH w/tbg. PU rtmr RIH & set rtmr @ 3200'. Sqz w/75 sx Cl "G" neat. Locked up @ 3500# w/2 bbls displ remaining. Pull out of rtmr, left 50' cmt on top of same. POH. Shot 4 holes @ 1300'. Set rtmr on WL @ 1222'. RIH w/tbg & stab rtmr. Brk circ on tbg w/returns on 9-5/8" x 5-1/2" annulus. Pmpd 150 sx Cl "G" & displ'd to rtmr. Pull out of rtmr & rev out. Stab in & tst to 1000# - OK. POH. Set 100' plug in top of 5-1/2" csg using Cl "G" neat. Cut off wellhd & csg. Dmp 10 sx Cl "H" in 5-1/2" & 9-5/8" csg. Weld on "underground" DHM @ 2' 8" below GL. RR 1300 hrs 10/27/84.

10/26/84 3955

Day-25 PBD: 3398' - Prep to P & A. (5-1/2" @ 3954')
15-1/2 hr SITP 80 psi, CP 350 psi. Swbd, IFL 550' above SN. 5 gals oil on top of fld on 1st pull. Made hourly runs w/about 300' of entry on ea run. Well would blw 3 min after ea run - no flammables. 16 bbls produced today of which 1/3-1/2 was oil. Total recovery since frac 947.5 bbls. Accum oil produced 1-3/4± bbls. Prep to P & A.

Jeep Trail #1
NE NW Section 28-18S-10E
Emery County, Utah

- 10/19/84 3955 Day-19 PBD: 3400' - Prep to resume swbg. (5-1/2" @ 3954')
RU Howco. Acidized perfs selectively w/1000 gal FEA acid w/add using PPI
pkr set @ 7' spacing. PU to 3214' & set pkr. Swb FL to SN & rec'd 18.5 BA
& KCl wtr. Wait 1-1/2 hrs. Run swb, no entry. SDON.
- 10/20-22 3955 Day-21 PBD: 3400' - Testing. (5-1/2" @ 3954')
No press. Ran swb, 150' of entry. Ran swb every 2 hrs - no entry. RD swb.
Load tbg w/2% KCl wtr. Rel'd pkr & POH. RIH w/notched tbg clr on tbg to
3232'. SDFN & Saturday. PU blast jt, lnd tbg @ 3240'. RU frac lines. Frac
Upper Torrey w/40,500# 20/40 sd, 14-16 BPM @ 3600-3800 psi. ISIP 2850#. In
15 min 2390#. 841 bbl total load to recover. Opn well on 16/64" chk. Flwd
150 bbls frac fld @ 1880 psi. On 20/64" chk, flwd 225 bbls frac fld, 1520
psi. On 24/64" chk, flwd 150 bbls frac fld, 900 psi decr'g to 420 psi. 525
bbls load rec'd, 316 yet to recover.
- 10/23/84 3955 Day-22 PBD: 3400' - Testing. (5-1/2" @ 3954')
SITP 340 psi. Opnd well & blew dn in 8 min - no flammables. Ran swb to SN
@ 3238' w/FL @ 1500'. Pull swb, rec'd 8.6 bbls & well KO flwg. Flwd well
240 psi TP dying to 0 psi w/vy wet blw. Made 11 swb runs in 8 hrs
w/200-1200' of fld entry & vy weak blw after ea run. Initially, smpls had
a minor drk oil stain, currently are a vy drk yellow color. Total recovery
583 bbls (load was 841 bbls).
- 10/24/84 3955 Day-23 PBD: 3398' (corr'd) - Testing. (5-1/2" @ 3954')
13-1/2 hr SITP 260 psi, CP 425 psi. Opn well & blew dn N₂ in 4 min. Flwd 8
bbls frac fld & died. Made 6 swb runs. IFL 1440'. Had 250-1200' of entry
on runs #2-6. N₂ blow after ea run. Bleed off csg. RIH w/tbg & tag up @
3398' - no fill. ID 1 jt. SN @ 3370'. Made hourly swb runs rec'g 175-400'
ea run, but no blcw after runs. Corrected volumes = 915 bbls frac/KCl wtr
recovered + 1 bbl green/blk oil. Load 916 bbls, including 75 bbls csg
vol.
- 10/25/84 3955 Day-24 PBD: 3398' - Testing. (5-1/2" @ 3954')
15-1/2 hr SITP 40 psi, CP 425 psi. Made 4 swb runs. IFL @ 2370'.
Subsequent runs pld 700' decr'g to 250'. Fld was H₂O w/salty taste & vy
sli oil stain, no flammables. Made 7 hourly runs rec'g 300-350' ea hr, sli
oil stain, but nothing flammable. Cumulative recovery = 931.5 bbls. Total
load was 916 bbls. Total oil produced 1-1/3 - 1-1/2 bbls greenish blk
oil.

Jeep Trail #1
NE NW Section 28-18S-10E
Emery County, Utah

10/9/84 3955	Day-10 PBD: 3914' - Prep to plug back. (5-1/2" @ 3954') Made 3 swb runs w/vy wk gas flw to surf. Ran sinker bars & tag up @ 3783'. Made 2 add'l swb runs w/vy wk gas flw. Total recovery 46 bbls since frac. Prep to plug back to next tst zone.
10/10/84 3955	Day-11 PBD: 3514' est - Prep to tag cmt. (5-1/2" @ 3954') Unseat pkr, rev out, POH. Set rtnr on WL @ 3580'. RIH w/stinger. Sqz w/75 sx Cl "H" neat. Dump 1 bbl on top of rtnr. POH to 3514' & rev out. POH. SDFN.
10/11/84 3955	Day-12 PBD: 3530' - Swbg. (5-1/2" @ 3954') RIH w/bit. Tag cmt @ 3530'. Displ hole to 4% KCl wtr. POH. Perf 3408-3430' @ 4 SPF. PU pkr & RIH. Set pkr @ 3391', tst csg - OK. Swb well dn to 3390' rec'g 18.6 bbls KCl wtr. Flw well - no flw. Swb well f/3390' - no fld rec'd. SDFN.
10/12/84 3955	Day-13 PBD: 3530' - Prep to resume swb and tag FL. (5-1/2" @ 3954') No press on well. Tagged FL 40' higher than prev nite. Pld swb & rec'd 20 gals dirty KCl wtr. Filled tbq w/4% KCl wtr, press up 150 psi in annulus & tstd Howco lines to 4500 psi. PI 50 gals Xylene @ 1/2 BPM w/1600 psi, foll'd by 1000 gals acid @ 1 BPM w/1600 psi w/max rate of 3 BPM w/2000 psi. ISIP 1800 psi, 5 min SIP 1500 psi, 10 min SIP 1350 psi & 15 min SIP 1250 psi. Swbd back 19.6 BF & load yet to recover is 26.4 bbls. SDFN.
10/13-15 3955	Day-15 PBD: 3530' - Prep to perf A Sand, Upper Torrey. (5-1/2" @ 3954') SITP 20#. Bled dn in 1-1/2 min. Ran swb, 300' fld rise O/N. Rec'd 1-1/2 bbls dirty acid/KCl wtr. Made 3 add'l swb runs w/10 gal rec'd. Load hole w/KCl wtr. POH. RIH w/rtnr on WL & set @ 3400'. RIH w/stinger. Sqz w/75 sx "H", last 25 sx containing 0.3% Halad-4. Unsting f/retrn & rev out. POH. SDFN & Sunday. Prep to tst next zone.
10/16-17 3955	Day-17 PBD: 3400' - Prep to RIH w/pkr. (5-1/2" @ 3954') PU bit & RIH. Tag up @ 3398'. POH. Perf selective intervals w/16 shots f/3384-3253'. RIH w/pkr & set @ 3244'. Swb dn to pkr. Tst well f/2 hrs w/no flw or fld entry. SDFN. No tbq or csg press. Ran swb - no fld entry. Flw well - no flw. Fill tbq. Brk dn fm @ 2500#. Unseat pkr & POH. SDFN. Prep to RIH w/pkr to acidize.
10/18/84 3955	Day-18 PBD: 3400' - Prep to acidize. (5-1/2" @ 3954') Opn well, no press, no flw. RIH w/PIP pkr. Locate clrs @ 3373' & 3333'. WO acid pmp trk which is stuck 1-1/2 miles f/rig.

Jeep Trail #1
NE NW Section 28-18S-10E
Emery County, Utah

9/29-10/1 3955 Day-3 PBD: 3914' - Prep to perform foam frac. (5-1/2" @ 3954')
POH w/tbg. NU BOPs. PU bit & scrpr. RIH. Mix & circ 2% KCl wtr. Tst BOPs.
RU Schl & run CBL/VDL/GR/CCl. Gd bond. Perf'd 3660-3627' & 3618-3595'
using 4" Hyperjet II loaded 4 SPF, 90° phasing. RIH w/pkr & set @ 3533'.
Swb well dn to ldg nple @ 3526'. Last run sli gas cut. Flw tst - no flw.
RIH w/swb to 3526'. No fld. POH - swb cups OK. Flw tst - no flw. RIH w/swb
to 3526'. No fld. RD swb. SDFN & Sunday.

10/2/84 3955 Day-4 PBD: 3914' - WO Howco. (5-1/2" @ 3954')
At 0700 hrs, chk press on tbg - "zero". Made swb run to lndg nple @ 3526',
no fld, no flw. At 1430 hrs, made swb run to lndg nple, no fld, no flw. WO
Howco to perform brkdn trtmnt.

10/3/84 3955 Day-5 PBD: 3914' - Swbg. (5-1/2" @ 3954')
Opn tbg w/vy wk gas flw & 1' flare. WO Howco. RU Howco. Pmp 50 bbls 4% KCl
wtr w/1 gal Pen 5 & displ w/22 bbls 4% KCl. Used 224 ball sealers. Pmpd
job @ 4 BPM, 2300# & displ @ 8 BPM, 2600#. Final pmpg press 2800#, ISIP
1850#. After 15 min, 1800#. Bleed off & RU to swb. Swb dn to lndg nple,
wait 1/2 hr. Swb as foll w/ 1/2 hr between runs: Run #1 FL 900' above lndg
nple; Run #2 FL 400' above LN; Run #3 FL 75' above LN; Run #4 FL 175'
above LN w/tr oil; Run #5 FL 50' above LN; Run #6 FL 75' above LN w/tr
oil. 13 bbls load left to recover. SDFN.

10/4/84 3955 Day-6 PBD: 3914' - Testing. (5-1/2" @ 3954')
Opn tbg - no flw 0 psi. Ran swb, found FL 250' above lndg nple. Swb 1-1/2
bbls litely oil & gas cut wtr. Total rec'd 38-1/2 bbls. Cont'd swbg - no
fld. POH. RIH & set pkr @ 3533'. Foam frac well using 18M# 20/40 mesh sd @
10 BPM. Brk dn press 2980 psi. During job 3500 psi avg. ISIP 2425 psi.
Began flwg well @ 1715 hrs & 2400 psi TP. Well dead @ 2100 hrs. SDFN.

10/5/84 3955 Day-7 PBD: 3914' - Testing. (5-1/2" @ 3954')
Opn well - 200# on tbg & bled off in 15 min. Made 5 swb runs f/lndg nple @
3526'. Recovery varied f/30' to 400' loads. Accum recovery - 35 bbls.
SDFN.

10/6-8 3955 Day-9 PBD: 3914' - Testing. (5-1/2" @ 3954')
SITP 100#. Swb well w/occassional sml amt GTS. Total fld rec'd 39 bbls.
SDFN. SITP 100#. Swb f/ 10-1/2 hrs, rec'd 4 BF. On ea swb, had 1' flare of
gas. Total fld rec'd 43 BF. SDFN & f/Sunday.

4/

Jeep Trail #1
NE NW Section 28-18S-10E
Emery County, Utah

1/21/84 Day 21

TD: 3516' (56') - Cutting Core #4 (9-5/8" @ 1314')
MW: 9.4# Vis: 61 Pv/Yp: 22/11
Drl 7-7/8" hole to 3495'. POH. RIH w//CB. Cut Core #4 3495-3516'.

8/22/84 3524

Day-22 (8') - RIH w/tst tools (9-5/8" @ 1314')
MW: 9.4# Vis: 61 Pv/Yp: 24/20
Cut core #4 3495-3524'. POH, LD core & bbl. Rec'd 29'. RIH w/bit to 1300'. WO tst tools & wait f/daylite. FIH, circ & cond & POH. PU & RIH w/tst tools f/DST #2.

8/23/84 3670

Day-23 (146') - Drlg (9-5/8" @ 1314')
MW: 9.2# Vis: 45
Ran DST #2 (3475-3524'; Sinbad) @ 15-45-60-90 mins. IHP @ 1694 pi & FHP @ 1696 psi. IF const @ 19 psi & FF f/19-25 psi. ISIP was not recorded due to by-pass & FSIP @ 30 psi. DP rec'y: 15' drlg mud. Smplr rec'y: 2100 cc drlg mud. Recorded BHT @ 114°F. TIH w/B#5 & drld ahead to PD.

8/24/84 3880

Day-24 (210') - Drlg (9-5/8" @ 1314')
MW: 9.2# Vis: 46 Pv/Yp: 24/9
Drl 7-7/8" hole to PD. Survey: 2° @ 3730'. Est TD 3910'.

8/25-27 3955

Day-27 TD (75') - RD, WO evaluation. (5-1/2" @ 3954')
Drl to 3925'. Circ & cond hole. TOH to log. SLM (no corr). Log - DLL/MSFL, CNL/Litho dens/Cal/GR. LTD 3923'. TIH w/bit & drld to 3955'. TOH. Run BHC log. TIH & cond hole to run csg. POH & LD 8 pond DCs. Ran 94 jts 5-1/2", 17#, K-55, 8rd (3663') & 8 jts 5-1/2", 15.5#, J-55, 8rd csg (333'). Set csg @ 3954' KB, FC @ 3914'. Circ csg. Cmt w/Western Co. w/15 BW ahead, foll'd by 200 sx Pacesetter Lite (12.5 ppg), tailed w/150 sx C1 "H" (15.6 ppg). Gd returns. CIP @ 6:00 AM 8/26/84. Flts held. Set slips & cut off csg. Welded cap on csg. RD & RR 1300 hrs 8/26/84. (Drop f/report until evaluation commences.)

9/28/84 3955

Day-1 PBD: 3914' - PU tbq. (5-1/2" @ 3954')
RU SU 9/27/84. PU bit & scrpr. PU 2-7/8" tbq & RIH. (Dropped f/report of 8/25-27/84.)

Jeep Trail #1
NE NW Section 28-18S-10E
Emery County, Utah

8/10/84 2036

Day-10 (721') - Drlg. (9-5/8" @ 1314')
MW: 8.4# Wtr
Wrk on Hydril & tst same. Drl FC & GS. Drld 7-7/8" hole to PD.

8/11-13 2804

Day-13 (768') - WO equip. (9-5/8" @ 1314')
MW: 8.4# Wtr
Drld 7-7/8" hole to PD. TOH to surf csg. SD f/repairs. WO lite plt.
Survey: 1° @ 2660'.

8/14/84 3067

Day-14 (263') - Drlg. (9-5/8" @ 1314')
MW: 8.4# Wtr
Replaced lite plt. TIH - 20' fill. Drld 7-7/8" hole to PD. Top: Moenkopi
2920'. Will strt coring 3260' in Moenkopi.

8/15/84 3250

Day-15 (183') - Mix mud. (9-5/8" @ 1314')
MW: 8.4# Vis: 38 Pv/Yp: 14/6
Drld 7-7/8" hole to 3146'. TFB #5. Wsh & rm 100' to btm. Drld 7-7/8" hole
to PD. Circ & mix mud. Prep to core.

8/16/84 3271

Day-16 (21') - Cut Core #1. (9-5/8" @ 1314')
MW: 9.2# Vis: 50 Pv/Yp: 19/16
Mix mud, 10 std sht trip, 40' fill. Circ & cond. Sht trip - 4' fill.
Circ. POH. PU CB. RIH. Wsh 25' to btm. Cutting Core #1. Rig repair (2
hrs). Survey: 1-1/2° @ 3220'.

8/17/84 Day 17

TD: 3327' (56') - Cut Core #2. (9-5/8" @ 1314')
MW: 9.3# Vis: 61 Pv/Yp: 17/19
Cut Core #1, 3250-3300' Moenkopi fm, cut 50' & rec'd 44'. POH & LD same.
RIH, wsh 20' to btm, cutting Core #2.

8/18-20/84

Day 20

TD: 3460' (133') - Drlg (9-5/8" @ 1314')
MW: 9.3# Vis: 46 Pv/Yp: 22/11
Cut Core #2, 3300-3357'. POH. Cut 57', rec'd 47'. PU bit & RIH. Drl 10' of
lost core. POH. PU tst tools, RIH. DST #1. POH. DST #1 3255-3357'
Moenkopi, as foll: 15-45-90-180 min; IHP 1641 psi; IFP 66 psi & FFP 66
psi; ISIP 94 psi & FSIP 94 psi; max rec BHT 98°F; rec'y: 18' drlg mud;
smp l cbr rec'y: 1600 cc SGOM (.03 cf gas), resist 1.8 @ 80°. LD DST
tools. RIH w/core bbl, wsh 70' to btm, cut Core #3 3357-3394'. POH, cut
37', rec'd 37'. RIH w/bit. drld 7-7/8" hole to PD. (Rig rep 5-1/4 hrs).

2

Jeep Trail #1
NE NW Section 28-18S-10E
Emery County, Utah

7/31/84	60	Day -1 GL (0') - MI RT. (16" @ 60' GL) All equip needed to spud is on loc. RU, anticipate spud approx 1800 hrs 7/31/84.
8/1/84	70	Day-1 (10') - Prep to PU 8" DCs. (16" @ 60' GL) Fresh wtr. Fin RU. SPUD 12-1/4" hole 2345 hrs 7/31/84. Drld to 70'. Circ hole cln & TOH. LD 6" DC.
8/2/84	170	Day-2 (100') - Drlg. (16" @ 60' GL) Fresh wtr. Chg tools to PU 8" DC. Drld to PD.
8/3/84	335	Day-3 (165') - Drlg. (16" @ 60' GL) Fresh wtr. Drld 12-1/4" hole to PD w/TFB @ 197'. Survey: 1/2° @ 290'.
8/4-6	1058	Day-6 (723') - Drlg. (16" @ 60' GL) Fresh wtr. Drld 12-1/4" hole to PD w/TFB @ 689'. Survey: 1/4° @ 602' & 970'.
8/7/84	1276	Day-7 (218') - Drlg. (16" @ 60' GL) MW: 8.4# Wtr in pits Drld 12-1/4" hole to PD. Had 2 SDe to repair rig air system & repair pmp.
8/8/84	1315	Day-8 (39') - WOC. (16" @ 60' GL) MW: 8.4# Vis: 37 Drld 12-1/4" hole to PD. Circ & cond, POH & LD DC. Ran 9-5/8" csg w/shoe @ 1314', cmted w/320 sx TXI Lite & 125 sx "H" + 12# Thixad + 2# CC + 4#/sx LCM. CIP @ 2330 hrs. Top job w/50 sx thru 1" pipe. WOC. Survey: 0° @ 1283'.
8/9/84	1315	Day-9 (0') - Wrkg on BOPs. (16" @ 60' GL) MW: 8.4# Wtr Cut off 15", weld on csgd, NU BOPs. Tst blinds, PU bit & BHA. Tst rams & wrk on Hydril & chk manifold.

Jeep Trail #1
NE NW Section 28-18S-10E
Emery County, Utah

31. PERFORATION RECORD:

3660'-3627' and 3618'-3595'

3408'-3430'

3384'-3253'

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

3660'-3627' &
3618'-3595'

" "

27 bbls 4% KCL + 224 balls

3370 gal fluid, 386,100 SCF N₂ & 18,000# sand

3580'

squeeze with 75 sx Class "H" + 1 bbl cement
on top of retainer

3400'

squeeze with 75 sx Class "H"

3384'-3253'
" "

18 bbls acid
35,310 gal fluid, 408,452 SCF N₂ + 40,500# sand

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE

(See other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☒ Other _____
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RENVR. ☐ Other _____

2. NAME OF OPERATOR

ARCO Oil and Gas Company, Division of Atlantic Richfield Company

3. ADDRESS OF OPERATOR

P.O. Box 5540, Denver, Colorado 80217

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)

At surface 990' FNL & 1750' FWL

At top prod. interval reported below

At total depth

NE NW

API #43-045-30202

14. PERMIT NO. DATE ISSUED
OIL, GAS & MINING 7-19-84

15. DATE SPUDDED 7-31-84 16. DATE T.D. REACHED 8-25-84 17. DATE COMPL. (Ready to prod.) P & A 10-27-84 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 5760' GL 5772' KB 19. ELEV. CASINGHEAD 5760'

20. TOTAL DEPTH, MD & TVD 3955' 21. PLUG BACK T.D., MD & TVD Surface P & A 22. IF MULTIPLE COMPL., HOW MANY* P & A 23. INTERVALS DRILLED BY 0-3955' ROTARY TOOLS CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

PLUGGED AND ABANDONED

25. WAS DIRECTIONAL SURVEY MADE

NO

26. TYPE ELECTRIC AND OTHER LOGS RUN

DLL-MSBL; CNLD; RHC

27. WAS WELL CORRED

YES

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
16"	---	60' KB	-----Conductor-----		
9-5/8"	36#	1314' KB	12-1/4"	495 sx	None
5-1/2"	17# & 15.5#	3954' KB	7-7/8"	350 sx	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
---	---	None	---	---	---	None	---

31. PERFORATION RECORD (Interval, size and number)

SEE ATTACHED

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
SEE ATTACHED	

33.* PRODUCTION

DATE FIRST PRODUCTION _____ PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) PLUGGED AND ABANDONED WELL STATUS (Producing or shut-in) PJA

DATE OF TEST	HOURS TESTED	CHOKES SIZE	PROD'N. FOR	OIL—BSL.	GAS—MCF.	WATER—BSL.	GAS-OIL RATIO
---	---	PLUGGED	AND ABANDONED	---	---	---	---
FLOW. TUBING PRESS.	CASINO PRESSURE	CALCULATED	OIL—BSL.	GAS—MCF.	WATER—BSL.	OIL GRAVITY-API (CORR.)	
---	---	24-PLUGGED	AND ABANDONED	---	---	---	---

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS

Daily Well History

JST

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

L.B. Morse

TITLE Operations Manager

DATE 11-26-84

*(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries);				38. GEOLOGIC MARKERS		
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
Moenkopi	3250	3300	Cut 50', recovered 44'	Carmel	1252'	
Moenkopi	3300	3357	Cut 57', recovered 47'	Navajo	1664'	
Moenkopi	3357	3394	Cut 37', recovered 37'	Kayenta	2036'	
Sinbad/Black Dragon.	3495	3524	Cut 29, recovered 29'	Wingate	2202'	
				Chinle	2604'	
				Shiraump	2844'	
				Moenkopi	2904'	
				Torry Member	3164'	
Moenkop	3255	3357	IF 15", 65.8 psi-8.9 psi; ISI 45", 94 psi-26.7 psi; 2nd F 90", 65.8 psi - 8.9 psi; FSI 180", 94 psi - 26.7 psi; IH 1641-1560; BHT 98°F. Recovery 18' drilling mud	Sinbad	3408'	
				Black Drageon	3510'	
				Kaibab	3794'	
				White Rim	3842'	
Sinbad	3475	3524	Unsuccessful Test			

☐ ARCO Exploration Company
☒ ARCO Oil and Gas Company

Record Of Shipment Of Confidential Information

District

To: State of Utah - Natural Resources
3 Trade Center, Suite 350
SLC, UT 84180-1203

From: ARCO Exploration - G. S. Wise
P.O. Box 5540
Denver, CO 80217

☒ Enclosed

☐ Under separate cover

☐ Via

Subject

Completion Data

Page 2 of 2

Quantity

Map number & description

- | | |
|----|---|
| 4 | #1 Forest Creek Divide
(1) Dual Laterlog-MSFL; (1) Borehole Compensated Sonic;
(1) Litho Density Compensated Neutron; (1) Core Analysis Report. |
| 10 | #1 Jeep Trail
(1) Dual Laterlog-MSFL-Gamma Ray-SP; (1) Borehole
Compensated Sonic; (1) Compensated Neutron Litho-
Density-Gamma; (2) Drill Stem Test Reports; (1) Core
Analysis Report. |
| 4 | #1 Rocky Ford
(1) Dual Laterlog-MSFL; (1) Borehole Compensated Sonic;
(1) Litho Density Compensated; (1) Core Analysis
Report |

Note—Please verify and acknowledge receipt, by signing and returning the second copy of this transmittal.

Signed by

C. Hayes for G. S. Wise

Date

3/18/85

Received by

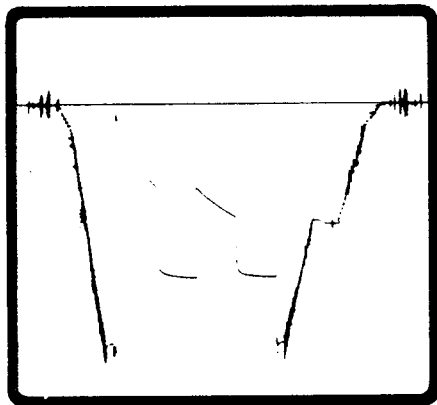
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Remarks

MAR 20 1985

DIVISION OF OIL
& GAS & MINING

FORMATION TESTING SERVICE REPORT



Duncan, Oklahoma 73536
A Halliburton Company

RECEIVED

MAR 20 1985

**DIVISION OF OIL
GAS & MINING**

JEEP TRAIL
LEAD NAME
WELL NO.
TEST NO.
TESTED INTERVAL
LEAD NAME
WELL NO.
TEST NO.
TESTED INTERVAL
LEAD NAME
WELL NO.
TEST NO.
TESTED INTERVAL

NOMENCLATURE

B	= Formation Volume Factor (Res Vol : Std Vol)	—
c_t	= System Total Compressibility	(Vol / Vol) psi
DR	= Damage Ratio	—
h	= Estimated Net Pay Thickness	Ft
k	= Permeability	md
m	{ = (Liquid) Slope Extrapolated Pressure Plot	psi cycle
		(Gas) Slope Extrapolated m(P) Plot
		MM psi ² cp cycle
m(P*)	= Real Gas Potential at P*	MM psi ² cp
m(P _f)	= Real Gas Potential at P _f	MM psi ² cp
AOF ₁	= Maximum Indicated Absolute Open Flow at Test Conditions	MCFD
AOF ₂	= Minimum Indicated Absolute Open Flow at Test Conditions ..	MCFD
P*	= Extrapolated Static Pressure	Psig
P _f	= Final Flow Pressure	Psig
Q	= Liquid Production Rate During Test	BPD
Q ₁	= Theoretical Liquid Production w/ Damage Removed	BPD
Q _g	= Measured Gas Production Rate	MCFD
r _i	= Approximate Radius of Investigation	Ft
r _w	= Radius of Well Bore	Ft
S	= Skin Factor	
t	= Total Flow Time Previous to Closed-in	Minutes
Δt	= Closed-in Time at Data Point	Minutes
T	= Temperature Rankine	R
φ	= Porosity	—
μ	= Viscosity of Gas or Liquid	cp
Log	= Common Log	

TerraTek Core Services, Inc.®

October 29, 1984

ARCO Exploration Company
707 17th Street
P.O. Box 5540
Denver, Colorado 80202

Attention: Jim Perkins

Subject: Core Analysis Data; Jeep Trails #1 Well; Emery County,
Utah; TTCS File No. 85032

Gentlemen:

Diamond coring equipment and water base mud were used to obtain 4.0-inch diameter cores from the formations and intervals shown on the preceding page in the subject well. A representative of Terra Tek Core Services received the cores at the wellsite where they were preserved in plastic polytubing and transported to our Salt Lake City laboratory for routine full diameter analysis.

A core gamma log was recorded and, along with porosity, permeability, grain density and fluid saturation plots, is shown on the enclosed Teklog.

Residual fluid removal was accomplished by the low-temperature solvent extraction method on the full diameter samples cut from the cores. Porosities were determined by Boyle's law (helium) grain volumes and Archimedes (water) bulk volumes. Horizontal permeabilities to nitrogen were measured in a hassler sleeve using an orifice manometer and traveling meniscus to monitor downstream flow.

Data resulting from the above analysis is tabulated on pages one through four. Following this analysis is a summary reflecting average data by zones based on permeability, porosity and fluid saturation variations.

- 360 Wakara Way • Salt Lake City, Utah 84108 • (801) 584-2480
- 920 Central Avenue • Suite #2 • Billings, Montana 59102 • (406) 256-0371
- 1625 Broadway • Suite 2110 • Denver, Colorado 80220 • (303) 595-0263

ARCO Exploration Co. Jeep Trails #1 Well

Page 2

In addition to the above analysis, controlled temperature retort analysis was performed on those zones, as specified by you, to provide rapid porosity and residual fluid measurements. The results of this analysis follows the full diameter data.

The cores have been slabbed as instructed. The distribution is as follows:

Both slabs: ARCO Exploration
11809 E. 51st Street
Denver, Colorado 80239
Attention: Steve Johnson

We sincerely appreciate this opportunity to be of service.

Very truly yours,

A handwritten signature in black ink, appearing to read "Rick Dutson", with a stylized flourish at the end.

Rick Dutson

Director of Operations

RD/slp

FINAL DISTRIBUTION

ARCO EXPLORATION CO.

Jeep Trails #1 Well
Emery County, Utah

TTCS File No. 85032

3 COPIES SENT TO:

ARCO Exploration Company
Attn: James M. Perkins
Senior Geologist
P.O. Box 5540
Denver, Colorado 80217

1 COPY SENT TO:

ARCO Exploration Company
Attn: L. D. Brockett
Manager Exploration Resources
P.O. Box 2819
Dallas, Texas 75221

1 COPY SENT TO:

ARCO Exploration Company
Attn: R. J. Aldridge
Engineering Manager
P.O. Box 5540
Denver, Colorado 80217

4 COPIES SENT TO:

ARCO Oil & Gas Company
Attn: Kathy Flinn
Operations & Information
P.O. Box 5540
Denver, Colorado 80217

TerraTek Core Services, Inc.®

ARCO EXPLORATION CO.
Jeep Trails #1 Well
Emery County, Utah

TTCS File No. 85032

<u>Core No.</u>	<u>Interval</u>	<u>Formation</u>
1	3250.0 - 3300.0	Moenkopi
2	3300.0 - 3358.0	Moenkopi
3	3358.0 - 3395.0	Moenkopi
-	3395.0 - 3495.0	Drilled Interval
4	3495.0 - 3525.0	Sinbad/Black Dragon

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MAR 20 1985

DIVISION OF OIL
GAS & MINING

TerraTek Core Services, Inc.®

University Research Park - 360 Wakara Way - Salt Lake City, Utah 84108 - (801) 584-2480 - TWX 910-925-5284

ARCO EXPLORATION COMPANY

Well: Jeep Trails #1
Field: Wildcat
Drilling Fluid: LSND

State: Utah
County: Emery
Location: Sec 28-T18S-R10E

Date: 29 Oct 1984
TICS File #: 85032
Elevation:

FULL DIAMETER DEAN-STARK ANALYSIS

Sample Number	Depth (feet)	Permeability		Porosity (%)	Saturation		Grain Density (gm/cc)	Lithology
		Horz (md)	Horz-90° (md)		Oil (%)	H2O (%)		

MOENKOPI FORMATION

	3250.0 - 3255.0							Shale
1	3255.0-56.0	0.02	0.01	3.1	7.5	83.7	2.75	Sd,vfg,dol,sl/sltg
2	3256.0-57.0	0.02	0.02	3.3	13.3	76.5	2.75	Sd,vfg,dol,sl/sltg
3	3257.0-58.0	0.26	0.13	2.6	15.4	78.9	2.71	Sd,vfg,dol,sl/sltg
4	3258.0-59.0	0.05	0.03	3.7	21.3	59.8	2.73	Sd,vfg,dol,sl/sltg
5	3259.0-60.0	0.01	<0.01	3.2	24.5	64.2	2.73	Sd,vfg,dol,sl/sltg
	3260.0 - 3278.0							Shale
6	3278.0-79.0	<0.01	<0.01	2.6	42.7	38.7	2.71	Sd,vfg,dol,sl/sltg
	3279.0 - 3282.0							Shale
7	3282.0-83.0	0.01	0.01	2.8	28.4	57.3	2.74	Sd,vfg,dol,sl/sltg
8	3283.0-84.0	0.07	0.01	3.7	31.2	40.2	2.75	Sd,vfg,dol,sl/sltg
9	3284.0-85.0	0.04	<0.01	3.0	24.1	65.0	2.73	Sd,vfg,dol,sl/sltg
	3285.0 - 3289.0							Shale
10	3289.0-90.0	<0.01	<0.01	3.0	49.4	25.2	2.73	Sd,vfg,dol,sl/sltg
11	3290.0-91.0	0.21+	<0.01	3.4	43.6	36.3	2.73	Sd,vfg,dol
12	3291.0-92.0	0.15+	<0.01	3.1	41.2	41.0	2.72	Sd,vfg,calc
13	3292.0-93.0	0.03	0.02	3.0	46.0	36.3	2.72	Sd,vfg,calc,sl/shg
14	3293.0-94.0	0.52+	0.27	3.0	21.7	65.7	2.72	Sd,vfg,calc,sl/dol

+ Horizontal dehydration crack

TerraTek Core Services, Inc.®

Page 2

University Research Park - 360 Wakara Way - Salt Lake City, Utah 84108 - (801) 584-2480 - TWX 910-925-5284

ARCO EXPLORATION COMPANY

Date: 29 Oct 1984

TTCS File #: 85032

Well:

Jeep Trails #1

FULL DIAMETER DEAN-STARK ANALYSIS

Sample Number	Depth (feet)	Permeability		Porosity (%)	Saturation		Grain Density (gm/cc)	Lithology
		Horz (md)	Horz-90° (md)		Oil (%)	H2O (%)		
	3294.0 - 3300.0							Not Recovered
	3300.0 - 3301.0							Shale
15	3301.0-02.0	0.11	0.03	3.3	38.0	44.9	2.72	Sd,vfs,calc,sl/sltg
16	3302.0-03.0	<0.01	<0.01	3.3	39.5	40.0	2.71	Sd,vfs,calc,sl/sltg
17	3303.0-04.0	0.02	0.02	4.2	42.0	24.6	2.72	Sd,vfs,calc,sl/sltg
18	3304.0-05.0	0.08	0.01	4.7	43.3	24.6	2.72	Sd,vfs,calc,sl/sltg
19	3305.0-06.0	0.63+	0.05	4.5	49.2	28.6	2.72	Sd,vfs,calc,sl/sltg
20	3306.0-07.0	0.03	0.01	3.4	54.0	32.1	2.71	Sd,vf-fs,calc,sl/sltg
21	3307.0-08.0	0.29+	0.14	2.0	52.9	28.6	2.72	Sd,vfs,calc,sl/sltg
	3308.0 - 3313.0							Shale
22	3313.0-14.0	<0.01	<0.01	1.8	46.7	18.1	2.70	Sd,vfs,calc,sl/sltg
	3314.0 - 3317.0							Shale
23	3317.0-18.0	0.01	0.01	4.0	36.8	16.5	2.71	Sd,vfs,calc,sl/sltg
24	3318.0-19.0	0.11	0.04	4.4	41.5	16.5	2.71	Sd,vfs,calc,sl/sltg
25	3319.0-20.0	0.08	0.08	5.5	29.6	17.8	2.69	Sd,vfs,calc,sl/sltg
26	3320.0-21.0	0.04	0.02	3.5	39.2	15.4	2.70	Sd,vfs,calc,sl/sltg
	3321.0 - 3325.0							Shale
27	3325.0-26.0	<0.01	<0.01	2.4	43.0	38.4	2.73	Sd,vfs,calc,sl/sltg
	3326.0 - 3333.0							Shale
28	3333.0-34.0	<0.01	<0.01	1.9	51.9	40.6	2.73	Sd,vfs,calc,sl/sltg
29	3334.0-35.0	1.9+	0.44+	2.0	46.1	35.5	2.74	Sd,vfs,calc,sl/sltg

+ Horizontal dehydration crack

TerraTek Core Services, Inc.®

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University Research Park - 360 Wakara Way - Salt Lake City, Utah 84108 - (801) 584-2480 - TWX 910-925-5284

ARCO EXPLORATION COMPANY

Date: 29 Oct 1984

ITCS File #: 85032

Well:

Jeep Trails #1

FULL DIAMETER DEAN-STARK ANALYSIS

Sample Number	Depth (feet)	Permeability		Porosity (%)	Saturation		Grain Density (gm/cc)	Lithology
		Horz (md)	Horz-90° (md)		Oil (%)	H2O (%)		
30	3335.0-36.0 3336.0 - 3345.6 3345.6 - 3358.0	0.04	0.01	1.4	12.2	61.5	2.73	Sd,vfgrsl/dol,sl/slt Shale,dol,sl stks Not Recovered
31	3358.0-59.0	<0.01	<0.01	2.9	54.1	29.8	2.71	Sd,vfgrsl/dol,sl/slt
32	3359.0-60.0	0.01	0.01	2.9	48.4	28.3	2.71	Sd,vfgrsl/dol,sl/slt
33	3360.0-61.0	0.79+	<0.01	1.8	28.5	67.9	2.74	Sd,vfgrsl/dol,sl/slt
34	3361.0-62.0	<0.01	<0.01	2.1	34.0	57.4	2.74	Sd,vfgrsl/dol,sl/slt
35	3362.0-63.0 3363.0 - 3365.0	0.43+	0.35	2.4	29.9	50.0	2.74	Sd,vfgrsl/dol,sl/slt Sd,sl/dol,shly
36	3365.0-66.0	<0.01	<0.01	2.4	40.4	49.4	2.73	Sd,vfgrsl/dol,sl/slt
37	3366.0-67.0	0.02	0.01	3.1	53.6	31.7	2.72	Sd,vfgrsl/dol,sl/slt
38	3367.0-68.0	<0.01	<0.01	2.7	37.9	43.2	2.72	Sd,vfgrsl/dol,sl/slt
39	3368.0-69.0	<0.01	<0.01	3.3	42.5	35.9	2.71	Sd,vfgrsl/dol,sl/slt
40	3369.0-70.0	0.01	<0.01	3.4	46.3	31.1	2.71	Sd,vfgrsl/dol,sl/slt
41	3370.0-71.0	0.01	<0.01	3.5	49.2	30.9	2.71	Sd,vfgrsl/dol,sl/slt
42	3371.0-72.0 3372.0 - 3376.0	0.03	0.03	3.0	43.9	42.0	2.72	Sd,vfgrsl/dol,sl/slt Sd,sl/dol,shly
43	3376.0-77.0 3377.0 - 3387.0	0.09+	0.01	2.3	33.5	50.2	2.72	Sd,vfgrsl/dol,sl/shly Shale,sl/dol,sl/slt
44	3387.0-88.0	0.29+	0.22+	2.7	31.0	54.1	2.75	Sd,vfgrsl/dol,sl/shly
45	3388.0-89.0 3389.0 - 3390.0	4.6+	4.0+	2.9	17.9	75.4	2.76	Sd,vfgrsl/dol,sl/shly Sl,sl/dol,sh stks

+ Horizontal dehydration crack

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University Research Park - 360 Wakara Way - Salt Lake City, Utah 84108 - (801) 584-2480 - TWX 910-925-5284

ARCO EXPLORATION COMPANY

Date: 29 Oct 1984

ITCS File #: 85032

Well:

Jeep Trails #1

FULL DIAMETER DEAN-STARK ANALYSIS

Sample Number	Depth (feet)	Permeability		Porosity (%)	Saturation		Grain Density (gm/cc)	Lithology
		Horz (md)	Horz-90° (md)		Oil (%)	H2O (%)		
46	3390.0-91.0 3391.0 - 3395.5 3395.5 - 3495.0	<0.01	<0.01	1.3	38.3	35.9	2.71	Sd,vfs,sl/dol,sl/shly Sh,sl/dol Drilled Interval
SINBAD/BLACK DRAGON FORMATION								
47	3495.0-96.0	<0.01	<0.01	6.4	15.1	63.2	2.82	Sd,vfs,sl/calc,sl/slt,pyr
48	3496.0-97.0	1.6	0.85	5.4	15.1	71.6	2.80	Sd,vfs,sl/calc,sl/cl,pyr
49	3497.0-98.0	<0.01	<0.01	5.9	25.7	37.2	2.79	Sd,vfs,sl/calc,pyr
50	3498.0-99.0	0.06	0.05	6.6	28.3	31.5	2.76	Sd,vfs,sl/calc,sl/slt
51	3499.0-00.0	0.03	0.02	4.8	28.8	31.1	2.77	Sd,vf-fs,sl/calc,sl/shly
52	3500.0-01.0	0.23+	0.03	5.8	22.5	44.1	2.79	Sd,vf-fs,sl/calc,sl/shly
53	3501.0-02.0	0.11	0.10	9.3	21.5	41.1	2.80	Sd,vf-fs
54	3502.0-03.0	0.02	0.01	9.0	14.7	61.7	2.83	Sd,vf-fs
55	3503.0-04.0	2.3+	2.1+	8.9	12.7	63.5	2.84	Sd,vfs,dol,sty
56	3504.0-05.0	0.45+	0.41+	7.0	7.9	48.8	2.86	Sd,vfs,dol
57	3505.0-06.0	0.26+	0.23+	8.2	8.0	57.8	2.84	Sd,vfs,dol
58	3506.0-07.0	0.02	0.01	8.9	12.7	50.6	2.83	Sd,vfs,dol
59	3507.0-08.0	<0.01	<0.01	5.2	21.7	56.4	2.84	Sd,vfs,dol VF
	3508.0 - 3512.0							Sd,vfs,dol,sl/slt
60	3512.0-13.0	<0.01	<0.01	1.7	4.2	54.5	2.75	Sd,m-cs,dol,sl/slt,sty
61	3513.0-14.0 3514.0 - 3516.0	<0.01	<0.01	5.1	23.6	46.3	2.83	Sd,m-cs,dol,sl/slt Shale,sl/slt
62	3516.0-17.0 3517.0 - 3525.0	0.73+	0.16+	3.8	20.6	43.1	2.78	Sd,m-cs,dol,sl/shly,sty Shale,sl/slt

+ Horizontal dehydration crack

TerraTek Core Services, Inc.®

University Research Park - 360 Wakara Way - Salt Lake City, Utah 84108 - (801) 584-2480 - TWX 910-925-5284

ARCO EXPLORATION COMPANY

Well: Jeep Trails #1
Field: Wildcat
Drilling Fluid: LSND

State: Utah
County: Emery
Location: Sec 28-T18S-R10E

Date: 29 Oct 1984
TICS File #: 85032
Elevation:

FULL DIAMETER DEAN-STARK ANALYSIS DATA SUMMARY

Zone Number	Depth Interval (feet)	Number of samples	Permeability Horz (md)	Permeability Horz-90° (md)	Porosity (%)	Saturation Oil (%)	Saturation H2O (%)	Grain Density (gm/cc)
MOENKOPI FORMATION								
1	3255.0-260.0	5	0.07 [0.10]	0.04 [0.05]	3.2 [0.4]	16.4 [6.7]	72.6 [10.2]	2.73 [0.0]
2	3278.0-285.0	4	0.03 [0.03]	<0.01 [0.00]	3.0 [0.5]	31.6 [8.0]	50.3 [12.9]	2.73 [0.0]
3	3289.0-294.0	5	0.18+ [0.20]	0.06+ [0.12]	3.1 [0.1]	40.4 [10.9]	40.9 [15.0]	2.72 [0.0]
4	3301.0-308.0	7	0.17 [0.23]	0.04 [0.05]	3.6 [0.9]	45.6 [6.5]	31.9 [7.8]	2.72 [0.0]
5	3313.0-321.0	5	0.05 [0.04]	0.03 [0.03]	3.9 [1.4]	38.8 [6.3]	16.8 [1.1]	2.70 [0.0]
6	3325.0-336.0	4	0.01 [0.02]	<0.01 [0.00]	1.9 [0.4]	38.3 [17.8]	44.0 [11.8]	2.73 [0.0]

(+) Sample standard deviation

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ARCO EXPLORATION COMPANY

Date: 29 Oct 1984

ITCS File #: 85032

Well:

Jeep Trails #1

DATA SUMMARY

Zone Number	Depth Interval (feet)	Number of samples	Permeability		Porosity (%)	Saturation		Grain Density (g/cc)
			Horz (md)	Horz-90° (md)		Oil (%)	H2O (%)	
7	3358.0-391.0	16	0.02 [0.02]	<0.01 [0.01]	2.7 [0.6]	39.3 [9.9]	44.6 [14.2]	2.72 [0.0]

SINBAD/BLACK DRAGON FORMATION

1	3495.0-501.0	6	0.03 [0.03]	0.02 [0.02]	5.8 [0.7]	22.6 [6.2]	46.4 [17.1]	2.79 [0.0]
2	3501.0-507.0	6	0.53+ [0.90]	0.48+ [0.83]	8.5 [0.9]	12.9 [5.0]	53.9 [8.6]	2.83 [0.0]
3	3507.0-517.0	4	<0.01 [0.00]	<0.01 [0.00]	3.9 [1.6]	17.5 [9.0]	50.1 [6.4]	2.80 [0.0]

[] Sample standard deviation

TerraTek Core Services, Inc.®

University Research Park - 360 Wakara Way - Salt Lake City, Utah 84108 - (801) 584-2480 - TWX 910-925-5284

ARCO EXPLORATION COMPANY

Well: Jeep Trails #1
Field: Wildcat
Drilling Fluid: LSHD

State: Utah
County: Emery
Location: Sec 28-T186-R10E

Date: 29 Oct 1984
ITCS File #: 35032
Elevation:

RETORT ANALYSIS - SUMMATION OF FLUIDS POROSITY

Sample Number	Depth (feet)	Permeability	Porosity	Saturation		Grain	Lithology
		Horz (md)	(%)	Oil (%)	H2O (%)	Density (gm/cc)	

MOENKOPI FORMATION

1	3255.0-56.0	<0.01	3.2	4.1	66.0	
2	3256.0-57.0		3.5	15.0	59.9	
3	3257.0-58.0		3.3	16.2	48.6	
4	3258.0-59.0		3.3	27.9	39.8	
5	3259.0-60.0	<0.01	2.4	5.6	61.6	
6	3278.0-79.0		2.3	22.9	34.3	
7	3282.0-83.0		3.0	17.9	53.8	
8	3283.0-84.0		2.7	19.5	48.7	
9	3284.0-85.0		2.5	21.1	63.2	
10	3287.0-90.0	0.01	2.5	62.7	20.9	
11	3290.0-91.0		2.2	54.6	24.3	
12	3291.0-92.0		2.7	44.0	39.2	
14	3293.0-94.0	0.01	3.6	33.4	51.9	
15	3301.0-02.0		2.1	56.1	25.0	
16	3302.0-03.0		2.6	35.8	40.9	
17	3303.0-04.0		2.7	34.8	49.7	
18	3304.0-05.0		2.3	51.6	22.9	
19	3305.0-06.0		3.0	52.4	34.9	

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University Research Park - 360 Wakara Way - Salt Lake City, Utah 84108 - (801) 584-2480 - TWX 910-925-5284

ARCO EXPLORATION COMPANY

Date: 29 Oct 1984

TICS File #: 85032

Well:

Joe's Trails #1

REPORT ANALYSIS - SUMMATION OF FLUIDS POROSITY

Sample Number	Depth (feet)	Permeability	Porosity (%)	Saturation		Grain Density (gm/cc)	Lithology
		Horz (md)		Oil (%)	H2O (%)		
20	3306.0-07.0	6.0+	3.4	54.1	30.9		
22	3313.0-14.0		4.1	26.1	65.2		
23	3317.0-18.0		3.7	39.0	49.6		
24	3318.0-19.0		6.6	38.7	17.7		
25	3319.0-20.0	0.09	6.3	32.8	14.3		
26	3320.0-21.0		1.1	47.6	15.9		
28	3333.0-34.0		1.8	29.9	44.8		
29	3334.0-35.0	<0.01	1.6	34.2	35.6		
30	3335.0-36.0		1.3	10.6	63.3		
31	3338.0-39.0		1.7	39.3	40.6		
32	3359.0-60.0		2.0	33.7	38.9		
36	3365.0-66.0		1.7	30.7	46.1		
37	3366.0-67.0		1.7	30.2	45.4		
38	3367.0-68.0		1.6	32.2	40.2		
39	3368.0-69.0	0.01	2.3	39.3	33.7		
40	3369.0-70.0		2.0	44.8	25.6		
41	3370.0-71.0		2.5	36.3	41.5		
42	3371.0-72.0		1.8	29.4	44.1		
43	3376.0-77.0		1.3	10.2	50.9		
44	3387.0-88.0		2.5	21.4	64.1		
45	3388.0-89.0	<0.01	2.2	48.6	24.3		
46	3390.0-91.0		1.6	57.8	16.5		

+ Horizontal cleavage crack

TerraTek Core Services, Inc.®

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ARGO EXPLORATION COMPANY

Date: 29 Oct 1984

TICS File #: 85032

Well:

Jace Trails #1

RETORT ANALYSIS - SUMMATION OF FLUIDS POROSITY

Sample Number	Depth (feet)	Permeability Horz (md)	Porosity (%)	Saturation Oil H2O (%) (%)	Grain Density (gm/cc)	Lithology
------------------	-----------------	------------------------------	-----------------	----------------------------------	-----------------------------	-----------

SINBAD/BLACK DRAGON FORMATION

47	3495.0-96.0	0.01	8.4	6.3	85.1	
48	3496.0-97.0	0.01	6.2	8.6	77.3	
49	3497.0-98.0	0.01	2.9	32.2	64.4	
50	3498.0-99.0	0.01	2.7	35.2	40.3	
51	3499.0-00.0	0.01	4.4	12.3	73.6	
52	3500.0-01.0	0.01	6.8	13.6	74.0	
53	3501.0-02.0	0.01	7.3	12.5	75.3	
54	3502.0-03.0	0.01	6.8	14.0	72.1	
55	3503.0-04.0	0.03	9.5	23.9	58.9	
56	3504.0-05.0	0.04	7.3	7.3	51.0	
57	3505.0-06.0	<0.01	6.0	11.4	54.5	
58	3506.0-07.0	0.01	7.9	3.4	71.2	
59	3507.0-08.0	<0.01	4.9	5.6	78.3	
60	3512.0-13.0	<0.01	4.6	11.7	70.3	
61	3513.0-14.0	<0.01	4.2	22.8	58.6	
62	3516.0-17.0	<0.01	3.3	28.1	56.6	

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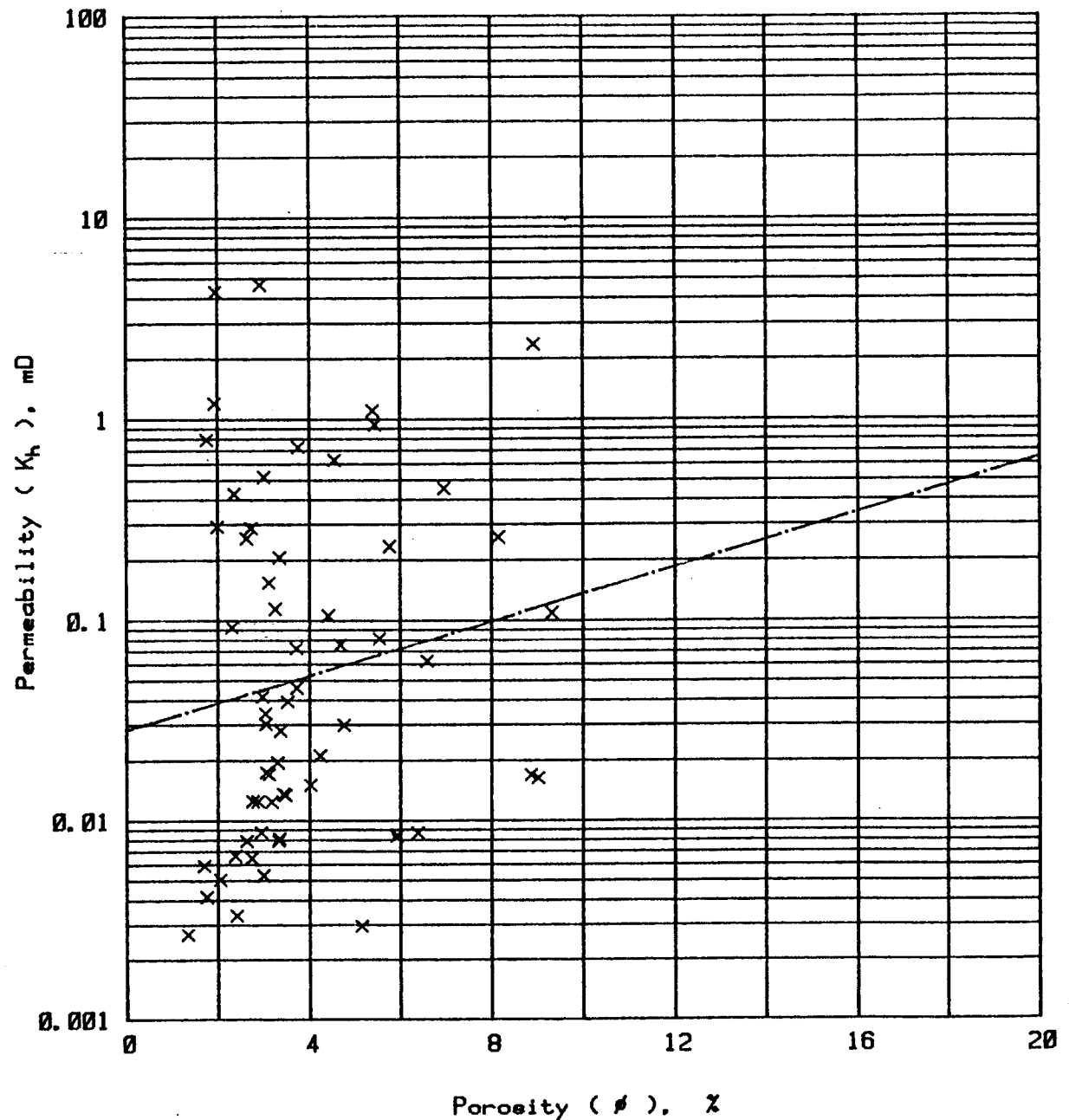
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HORIZONTAL PERMEABILITY VS POROSITY

ARCO EXPLORATION COMPANY

Jeep Trails #1
Wildcat Field
Emery County, Utah
29 Oct 1984

Depth Interval : 3250 to 3525 feet		
Permeability (K_h), mD		
Min	Max	Geo. Ave
0.00	4.65	0.05
Porosity (ϕ), %		
Min	Max	Average
1.3	9.3	3.9
Equation of the Line		
Log K_h = Slope ϕ + Log of Intercept		
Log K_h = .068 ϕ - 1.5485		
Correlation Coefficient : .156		



FLOPETROL JOHNSTON

Schlumberger

WELL PERFORMANCE TEST REPORT

A Production Systems Analysis (NODAL)
Based On
Drillstem Test DataTest Date
08-22-84Report No.:
42941 E

COMPANY

ARCO OIL & GAS

WELL

JEEP TRAIL # 1

TEST IDENTIFICATION

Test Type OPEN HOLE DST
 Test Number 2
 Formation MOENKOPI
 Test Interval 3476 - 3524 FT.
 Reference Depth KELLY BUSHING

WELL LOCATION

Field (WILDCAT)
 County EMERY
 State MONTANA
 Sec / Twn / Rng 28 T18S R10E
 Elevation NOT GIVEN

HOLE CONDITIONS

Total Depth (MVD/TVD) 3524 FT.
 Hole Size / Deviation Angle 7 7/8 IN./STRAIGHT
 Csg / Liner ID N/A
 Perf'd Interval N/A
 Shot Density / Phasing N/A
 Gun Type / Perf Cond N/A

MUD PROPERTIES

Mud Type LSND
 Mud Weight 9.5 LB/GAL
 Mud Resistivity 2.2 OHMS @ 64°F.
 Filtrate Resistivity 1.9 OHMS @ 70°F.
 Filtrate Chlorides 500 CL PPM
 Filtrate Nitrates NOT GIVEN

INITIAL TEST CONDITIONS

Gas Cushion Type NONE
 Surface Pressure N/A
 Liquid Cushion Type NONE
 Height Above DST Valve N/A

TEST STRING CONFIGURATION

Pipe Length / ID 2862 FT./2.83 IN.
 Collar Length / ID 563 FT./2.38 IN.
 Packer Depth(s) 3469 - 3476 FT.
 BH Choke Size 7 7/8 IN.

NET PIPE RECOVERY

Volume	Fluid Type	Physical Properties
0.083 BBL	MUD	2.1 OHM -M @ 70°F 800 PPM CL.

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Physical Properties
0.05 SCF	GAS	CORRECTED TO PWF
2100 CC	MUD	2.1 OHM -M @ 70°F 800 PPM CL.
Pressure 10 PSIG		GOR --- GLR 3.8

INTERPRETATION RESULTS

Reservoir Pressure @ Gauge Depth: N/A
 Gauge Depth 3486 FT.
 Hydrostatic Gradient N/A
 Potentiometric Surface N/A
 Effective Permeability to N/A
 Transmissibility N/A
 Skin Factor / Damage Ratio N/A
 Omega / Lambda (2Φ System) N/A
 Radius of Investigation N/A
 Measured Wellbore Storage N/A

ROCK / FLUID / WELLBORE PROPERTIES

Reservoir Temperature 114°F.
 Analysis Fluid Type N/A
 Formation Volume Factor N/A
 Viscosity N/A
 Z-Factor (gas only) N/A
 Net Pay 46 FT.
 Porosity 5%
 Total System Compressibility N/A
 Wellbore Radius328 FT.
 Expected Wellbore Storage N/A

FLOW RATE DURING DST

> 1 BLPD avg. rate RECEIVED

MAXIMUM FLOW RATE POTENTIAL AFTER COMPLETION

UNSUCCESSFUL TEST; MISSED BOTH SHUT-IN

MAR 20 1985**DIVISION OF OIL
GAS & MINING**

This rate is based on a specific completion design & producing time. Call FJS for details.

BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 42941E

INSTRUMENT NO. J-1243

DEPTH : 3486 FT

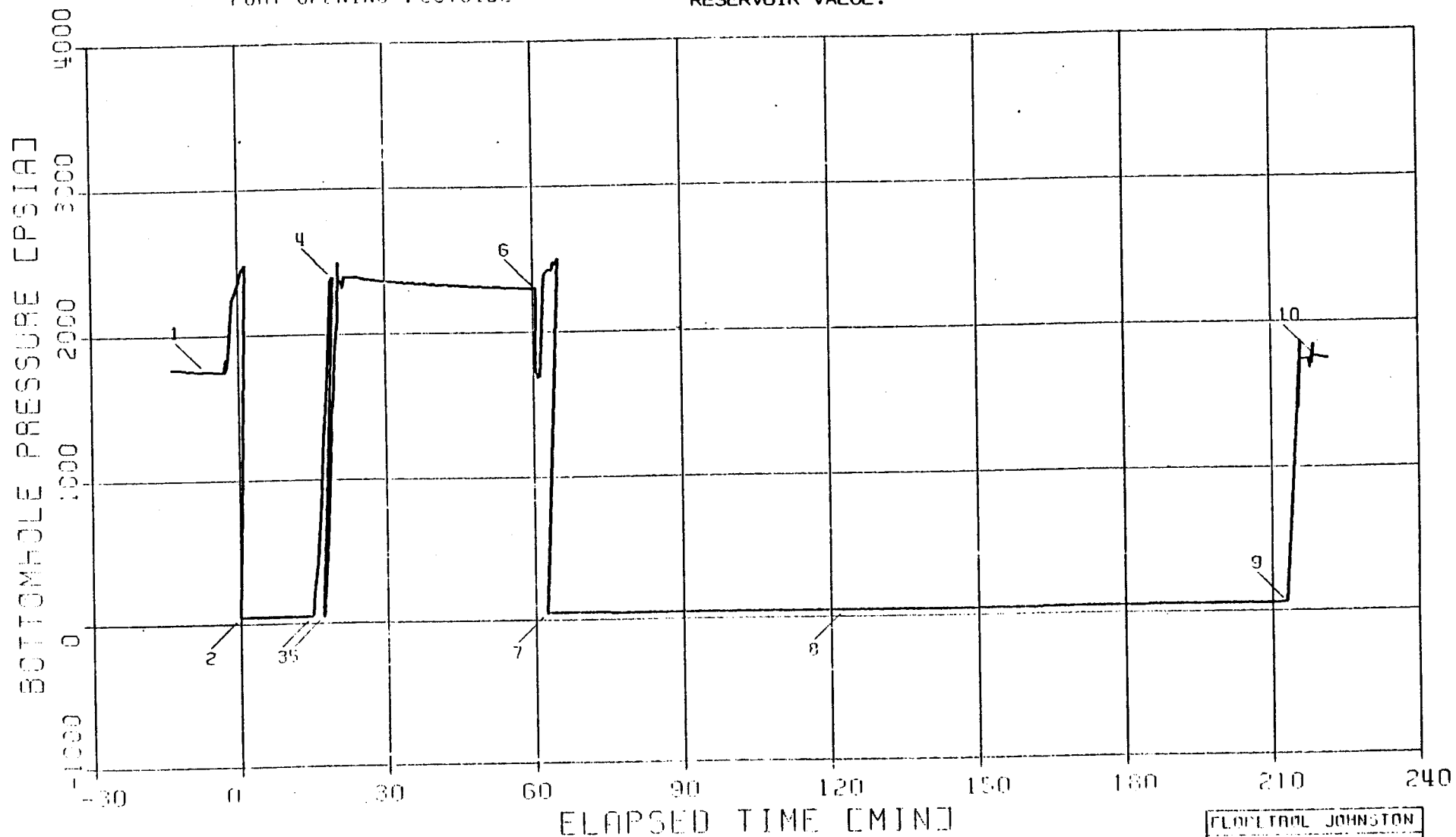
CAPACITY : 2800 PSI

PORT OPENING : OUTSIDE

COMPANY : ARCO OIL & GAS COMPANY

WELL : JEEP TRAIL #1

NOTE: OPENED BYPASS WHEN CYCLED TOOL CLOSED FOR INITIAL SHUT-IN;
LABEL PT. #6 (END SHUT-IN) NOT CONSIDERED TO BE A RELIABLE
RESERVOIR VALUE.



FLOPPY TAPE JOHNSTON
SITH UNBERGER

DST EVENT SUMMARY

Field Report # 42941 E

DATE (M/D/Y)	TIME (HR:MIN)	EVENT E.T. (MIN)	EVENT DESCRIPTION	SURFACE PRESSURE (PSIG)	FLOOR MANIFOLD CHOKE SIZE (64ths INCH)
08-22-84	0634	—	SET PACKER 1		B
	0636	—	OPENED TEST TOOL FOR INITIAL FLOW 2		U
			BLOW INCHES IN WATER, SURFACE BLOW		B
	0646		DEAD		B
	0651				L
					E
	0653	—	START SHUT-IN, SURFACE BLOW 5		
			BYPASSED SHUT-IN BOGUS		H
					D
					S
	0737		FINISHED SHUT-IN 6		E
	0738	—	OPENED TEST TOOL FOR FINAL FLOW 7		
	0739		DEAD		"
					"
					"
					"
					"
					"
					"
					"
					"
					"
					"
	0839	—	ATTEMPTED TO CLOSE TOOL 8		"
			DEAD		"
					"
					"
					"
	1009	—	FINISHED FLOW, BLOW DEAD 9		"
	1012	—	UNSEATED PACKER 10		—
		—	REVERSED OUT		
			UNSUCCESSFUL TEST: MISSED BOTH SHUT-INS		
		—	BEGAN TRIP OUT OF HOLE		

 * WELL TEST DATA PRINTOUT *

FIELD REPORT # : 42941E

COMPANY : ARCO OIL & GAS COMPANY
 WELL : JEEP TRAIL #1

INSTRUMENT # : J-1243
 CAPACITY [PSI] : 2800.
 DEPTH [FT] : 3486.0
 PORT OPENING : OUTSIDE
 TEMPERATURE [DEG F] : 114.0

LABEL POINT INFORMATION

#	TIME OF DAY	DATE	EXPLANATION	ELAPSED TIME, MIN	BDT HOLE PRESSURE PSIA
#	HH:MM:SS	DD-MM			
1	6:29:20	22-AU	HYDROSTATIC MUD	-6.67	1756
2	6:36: 0	22-AU	START FLOW	0.00	45
3	6:50:34	22-AU	END FLOW	14.56	45
4	6:55:27	22-AU	CYCLED TOOL	19.45	2389
5	6:52:55	22-AU	START SHUT-IN	16.91	47
6	7:36:37	22-AU	END SHUT-IN	60.61	2298
7	7:38:23	22-AU	START FLOW	62.39	48
8	8:38:38	22-AU	ATTEMPTED TO CLOSE TOOL	122.64	44
9	10: 9: 0	22-AU	END FLOW	213.00	58
10	10:14:54	22-AU	HYDROSTATIC MUD	218.90	1765

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
1	0.00	14.56	14.56	45	45
2	62.39	213.00	150.61	48	58

SUMMARY OF SHUTIN PERIODS

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	16.91	60.61	43.70	47	2298	45	14.56

TEST PHASE : FLOW PERIOD # 1

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BDT HDLE PRESSURE PSIA
HH:MM:SS	DD-MM	*****	*****	*****
6:36: 0	22-AU	0.00	0.00	45
6:41: 0	22-AU	5.00	5.00	45
6:46: 0	22-AU	10.00	10.00	45
6:50:34	22-AU	14.56	14.56	45

TEST PHASE : SHUTIN PERIOD # 1
FINAL FLOW PRESSURE [PSIA] = 45
PRODUCING TIME [MIN] = 14.56

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BDT HDLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
HH:MM:SS	DD-MM	*****	*****	*****	*****	*****
6:52:55	22-AU	16.91	0.00	47	2	
6:53:55	22-AU	17.91	1.00	545	500	1.192
6:54:55	22-AU	18.91	2.00	1257	1212	0.918
6:55:55	22-AU	19.91	3.00	1921	1876	0.767
6:56:55	22-AU	20.91	4.00	2366	2321	0.667
6:57:55	22-AU	21.91	5.00	2388	2343	0.592
6:58:55	22-AU	22.91	6.00	2388	2343	0.535
6:59:55	22-AU	23.91	7.00	2388	2343	0.489
7: 0:55	22-AU	24.91	8.00	2384	2339	0.450
7: 1:55	22-AU	25.91	9.00	2377	2332	0.418
7: 2:55	22-AU	26.91	10.00	2372	2327	0.390
7: 4:55	22-AU	28.91	12.00	2364	2319	0.345
7: 6:55	22-AU	30.91	14.00	2357	2312	0.310
7: 8:55	22-AU	32.91	16.00	2351	2306	0.281
7:10:55	22-AU	34.91	18.00	2346	2301	0.257
7:12:55	22-AU	36.91	20.00	2340	2295	0.238
7:14:55	22-AU	38.91	22.00	2335	2290	0.221
7:16:55	22-AU	40.91	24.00	2331	2286	0.206
7:18:55	22-AU	42.91	26.00	2326	2281	0.193
7:20:55	22-AU	44.91	28.00	2322	2277	0.182
7:22:55	22-AU	46.91	30.00	2319	2273	0.172
7:27:55	22-AU	51.91	35.00	2311	2266	0.151
7:32:55	22-AU	56.91	40.00	2303	2258	0.135
7:36:37	22-AU	60.61	43.70	2298	2253	0.125

TEST PHASE : FLOW PERIOD # 2

TIME OF DAY	DATE	ELAPSED	DELTA	BDT HOLE PRESSURE
HH:MM:SS	DD-MM	TIME,MIN	TIME,MIN	PSIA
*****	*****	*****	*****	*****
7:38:23	22-AU	62.39	0.00	48
7:43:23	22-AU	67.39	5.00	48
7:48:23	22-AU	72.39	10.00	48
7:53:23	22-AU	77.39	15.00	47
7:58:23	22-AU	82.39	20.00	46
8: 3:23	22-AU	87.39	25.00	45
8: 8:23	22-AU	92.39	30.00	44
8:13:23	22-AU	97.39	35.00	44
8:18:23	22-AU	102.39	40.00	44
8:23:23	22-AU	107.39	45.00	44
8:28:23	22-AU	112.39	50.00	44
8:33:23	22-AU	117.39	55.00	44
8:38:23	22-AU	122.39	60.00	44
8:43:23	22-AU	127.39	65.00	43
8:48:23	22-AU	132.39	70.00	44
8:53:23	22-AU	137.39	75.00	44
8:58:23	22-AU	142.39	80.00	44
9: 3:23	22-AU	147.39	85.00	45
9: 8:23	22-AU	152.39	90.00	46
9:13:23	22-AU	157.39	95.00	47
9:18:23	22-AU	162.39	100.00	48
9:23:23	22-AU	167.39	105.00	49
9:28:23	22-AU	172.39	110.00	50
9:33:23	22-AU	177.39	115.00	51
9:38:23	22-AU	182.39	120.00	52
9:43:23	22-AU	187.39	125.00	53
9:48:23	22-AU	192.39	130.00	54
9:53:23	22-AU	197.39	135.00	55
9:58:23	22-AU	202.39	140.00	55
10: 3:23	22-AU	207.39	145.00	56
10: 8:23	22-AU	212.39	150.00	57
10: 9: 0	22-AU	213.00	150.61	58